



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

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PROJECT NO. : TOX-346 GOAT  
PRODUCT : Bt COTTONSEEDS  
STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
REPORT NO. : 000061486  
DATE : 29.09.2007

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**SUB-CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOAT**

**WITH**

**Bt COTTONSEEDS**

**Report for:**

**METAHELIX LIFE SCIENCES PRIVATE LIMITED**  
PLOT NO. 3, KIADB 4<sup>th</sup> PHASE, BOMMASANDRA,  
BANGALORE- 560 099, INDIA

**Guidelines:**

‘DBT, Guidelines for Toxicity and Allergenicity Evaluation of Transgenic Seeds,  
Plants and Plant Parts’

**Prepared by:**

**SHRIRAM TOXICOLOGY CENTRE**

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**QUALITY ASSURANCE STATEMENT**

This is to certify that the work described in the study report entitled 'Sub chronic (90 days) oral toxicity study in goats' with 'Bt Cottonseeds' has been checked with respect to the study protocol in accordance to 'DBT, Guidelines for Toxicity and Allergenicity Evaluation of Transgenic Seeds, Plants and Plant parts' for non clinical laboratory studies.

The report provides true and accurate record of results obtained.

*Divya Bhat*  
**Sr. SCIENTIST**  
**QUALITY ASSURANCE**



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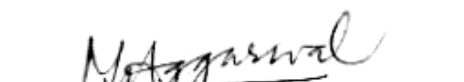
**STATEMENT OF COMPLIANCE**

We, the undersigned take overall responsibility to conduct the work described in the study entitled 'Sub-Chronic (90 Days) Oral Toxicity Study in Goats' with Bt Cottonseeds performed with respect to the study in accordance to 'DBT, Guidelines for Toxicity and Allergenicity Evaluation of Transgenic Seeds, Plants and Plant parts' for non-clinical laboratory studies.

All the raw data, documentation, protocol and copy of final report are retained in the archives at Shriram Toxicology Centre, Shriram Institute for Industrial Research, Delhi.

  
STUDY DIRECTOR

  
SCIENTIST PATHOLOGY

  
HEAD, DEPT. OF TOXICOLOGY

Approved for issue

  
JOINT DIRECTOR  
(MANAGEMENT)



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**SCIENTIFIC PERSONNEL INVOLVED IN THE STUDY**

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**(Pathologist)**

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**(Analyst)**

**Mr. VIJAY KUMAR JHA, DMLT.**

**(Lab Technician)**



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## SUMMARY

This study was designed to investigate the toxicological effects of 90 days repeated oral dose administration of “Bt Cottonseeds” to goats and for establishing its safety criteria.

Three groups comprising 12 goats (6 male and 6 female) each, were randomly selected and each group of animals were assigned with an identification number. First group was kept as control and fed on 400 gms of concentrate and green grass given *ad libitum*. The second and third groups of animals were fed with 50 Gms of Non-Bt Cottonseeds (Sample–I) and Bt Cottonseeds (Sample–II) respectively ie 12.5 % of the total concentrate which was 400 gms. The concentrate itself was 10 % of the total feed (approx. 4000 gms) i.e. concentrate and green grass.

The animals were observed daily for behavior, appearance and toxicological signs, if any. Body weights of all the test and control group animals were recorded on days 0, 7, 14, 21 ...90 respectively on weekly basis.

Criteria used to evaluate compound related effects included; appearance, behavior, body weights, morbidity, mortality, hematology and biochemical parameters.

The clinical laboratory determinations were made in all the animals of each group, initially before the start of the experiment, than on 30<sup>th</sup> day, 60<sup>th</sup> day and at the termination of the experiment.

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Under the conditions of this study, the oral administration of ‘Bt Cottonseeds’ in goats daily for 90 days did not induce any observable toxic effects when compared with the goats fed on ‘Non-Bt Cottonseeds’ and the normal diet i.e control group of animals.





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## **INTRODUCTION**

The current study was designed to determine the sub-chronic oral toxicity in goats by oral administration of Bt cottonseeds for 90 days, so as to obtain information on health hazards likely to arise from a repeated exposure.



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## **OBJECTIVES**

1. To determine the cumulative effects, which might occur by daily oral feeding of Bt Cotton- seeds to goats for 90 days, when compared to its control counterpart.
2. Provides information regarding possible health hazards due to repeated exposure over a limited period of time.



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### TEST SUBSTANCE

The sponsor is responsible for necessary characterization and evaluation of the test substance. The details of the test substance provided by the sponsor are as follows:

PRODUCT NAME : NON-Bt COTTONSEEDS (SAMPLE I) &  
Bt COTTONSEEDS (SAMPLE II)

SPONSOR : METAHELIX LIFE SCIENCES  
PRIVATE LIMITED

MATERIAL DESCRIPTION : YELLOWISHBROWN COLOURED  
POWDER

PACKED IN : BROWN COLOURED PAPER  
CARTONS

**Note:** For characterization details of test samples, see Annexure-I provided by the sponsor.

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## EXPERIMENTAL DESIGN

<u>STUDY</u>	Dept. of Toxicology
<u>LABORATORY</u>	Shriram Institute for Industrial Research 19, University Road, Delhi-110007 (INDIA)
<u>BREED</u>	The Indian Barberi breed
<u>ANIMAL SOURCE</u>	Mathura Veterinary College, Mathura (UP)
<u>SEX</u>	Male and Female
<u>WEIGHT RANGE</u>	15-18 Kgs
<u>HUSBANDRY</u>	All the animals were housed in properly constructed pens. Each pen measuring more than 1.5 sq.mt. per goat, allowing proper movement to the animals. The floor of the pen was made-up of concrete and walls were of bricks. Each pen was holding a single goat with an identifiable number. The goats were allowed to go out from their pens in an open field for about 2-3 hours each day.
<u>AGE OF ANIMALS</u>	12 months old
<u>WHEN STUDY</u>	
<u>BEGAN</u>	
<u>DURATION OF</u>	90 days
<u>STUDY</u>	
<u>ACCLIMATIZATION</u>	Not less than 15 days
<u>PERIOD</u>	



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**ANIMAL GROUP AND DOSAGE LEVELS**

<b>Group</b>	<b>Dosage Level</b>	<b>No. of animals</b>	
		<b>Male</b>	<b>Female</b>
Control	0.00	06	06
Non-Bt Cottonseeds (Sample I)	12.5% of Conc.	06	06
Bt Cottonseeds (Sample II)	12.5% of Conc	06	06



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### **PREPARATION OF DOSE**

Test sample diet was prepared by blending the test substance directly with the concentrate ration of the experimental animals. The test comprised feeding of goats (90 days regularly) with 12.5% of Non-Bt Cottonseeds (Sample-I) and Bt Cottonseeds (Sample-II) respectively. The concentrate itself was 10 % of the total feed i.e. concentrate and green grass.

All the groups of animals were fed conventional feed in their diet during a minimum 15 days acclimatization period prior to start of the study.

### **TREATMENT SCHEDULE**

Group 1 - Control	Nil
Group 2 - Non-Bt Cottonseeds	12.5% of Conc.
Group 3 - Bt Cottonseeds	12.5% of Conc.



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### EXPERIMENTAL PROCEDURE

Three groups comprising 12 goats (6 male and 6 female) each were randomly identified and the animals of each group were assigned with an identification number. First group was kept as control. The second and third groups of animals were fed 12.5% of Non-Bt Cottonseeds (Sample-I) and Bt Cottonseeds (Sample-II) respectively. The concentrate itself was 10% of the total feed i.e. concentrate and green grass.

### OBSERVATIONS

All experimental animals were observed for entire duration i.e. 90 days. Animals were observed once daily to record the clinical signs, morbidity and mortality. The body weights were recorded weekly. At the end of 91 days all the animals were weighed.

- Body weights** : Recorded individually prior to the treatment and there after at weekly intervals.
- Signs / symptoms** : Recorded daily in terms of clinical manifestation, if any.
- Mortalities** : If any, subjected to detailed macroscopic examination and tissue samples preserved for histopathological examination.



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## **CLINICAL LABORATORY STUDIES**

The following clinical laboratory determinations were made in all the animals of each group initially, before the start of the experiment on 30<sup>th</sup> day, 60<sup>th</sup> day and at the termination of the experiment.

### **BLOOD SAMPLING**

Food was withdrawn overnight prior to collection of samples. 5-8 ml of blood was withdrawn by jugular vein under light nembutol anaesthesia.

### **HAEMATOLOGY**

Haematology was carried out in blood. Blood was analysed for WBC, RBC, Hb, and Differential leucocytes, platelets and prothrombin time.

### **CLINICAL ENZYMES (BIOCHEMICAL PARAMETERS)**

Serum and blood were analysed for :

Albumin, Cholesterol, Glucose, Triglycerides, Glutamate Oxaloacetate Transferase, Glutamate Pyruvate Transferase, Gamma Glutamate Transferase, Phosphorous, Creatinine, Alkaline Phosphatase, Total Bilirubin, Direct Bilirubin, Calcium, Lactate De-Hydrogenase, Creatine Phospho Kinase, Total Protein.

### **BIOSTATISTICAL METHOD USED**

All the data were analysed by applying standard Student's T-test for data analysis.





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## **RESULT**

### **MORTALITY AND TOXIC SIGN & SYMPTOMS**

No mortality was observed in any of the test groups as well as the control group of animals. No toxic signs and symptoms were noticed in any animal of the test groups as well as the control group animals (Table-1). All the animals of each group showed good general health status (Table-2.1-2.9).

### **MEAN BODY WEIGHTS**

The mean body weights of all the animals fed on Bt Cottonseeds and Non- Bt Cotton- seeds were comparable with the mean body weights of the animals of control group. No significant differences were observed in the body weights pattern of animals of test groups, when compared to the weights of control group animals (Table-3.1-3.5) .

### **FEED CONSUMPTION**

The feed consumed by the animals of all the test groups was similar to the feed consumption of control group of animals (Table-4.1-4.5).

### **HAEMATOLOGICAL EVALUATIONS**

No significant changes were noted among the test groups and control group of animals with respect to haematological findings as all the parameters fell within the accepted limits of normal variations for goats (Table-5.1-5.5).



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## **CLINICAL BIOCHEMISTRY EVALUATIONS**

Clinical Biochemical evaluations disclosed no significant differences in the test groups when compared with control groups of animals, as all the parameters fell within the accepted limits of normal variations (Table-6.1-6.5).



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## **CONCLUSION**

Under the conditions of this study, the 90 days repeated oral administration of ‘Bt Cottonseeds (Sample-II)’ in goats did not induce any observable toxic effects as compared with the goats fed on ‘Non-Bt Cottonseeds (Sample-I) ’ and the control group of goats.



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## ABBREVIATIONS

DLC	- Differential Leucocyte Count
F	- Female
Hb	- Haemoglobin
HCT.	- Haematocrit
M	- Male
PT	- Prothrombin Time
PLT	- Platelets
RBC	- Red blood cell
SAP	- Serum Alkaline Phosphatase
TP	- Total Protein
WBC	- White Blood Cell
ALB	- Albumin
CHO	- Cholesterol
GLU	- Glucose
TG	- Triglycerides
GOT	- Glutamate Oxaloacetate Transferase
GPT	- Glutamate Pyruvate Transferase
GGT	- Gamma Glutamate Transferase
PHOS	- Phosphorous
CRE	- Creatinine

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ALP - Alkaline Phosphatase  
T-BIL - Total Bilirubin  
D-Bil - Direct Bilirubin  
Ca - Calcium  
LDH - Lactate De-Hydrogenase  
CK - Creatine Phospho Kinase



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**TABLE-1  
 MORTALITY AND TOXIC SIGN & SYMPTOMS**

Group	Dosage Level	No. of animals		Toxic Sign & symptoms	Died during treatment	
		Male	Female		Male	Female
Control	0.00	06	06	No treatment related toxic sign & symptoms could be noticed	00	00
Non-Bt Cottonseeds (Sample I)	12.5% of Conc.	06	06	No treatment related toxic sign & symptoms could be noticed	00	00
Bt Cottonseeds (Sample II)	12.5% of Conc	06	06	No treatment related toxic sign & symptoms could be noticed	00	00

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**TABLE-2.1**  
**DAILY HEALTH RECORD OF THE GOATS**  
**(IN THE MONTH OF JUNE, 2007)**  
**GROUP : CONTROL**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>Male</b>																														
<b>1</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>2</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>3</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>4</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>5</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>6</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>Female</b>																														
<b>7</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>8</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>9</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>10</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>11</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>12</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

H- Healthy

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**TABLE-2.2  
 DAILY HEALTH RECORD OF THE GOATS  
 (IN THE MONTH OF JULY, 2007)  
 GROUP : CONTROL**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<b>Male</b>																															
<b>1</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>2</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>3</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>4</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>5</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>6</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>Female</b>																															
<b>7</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>8</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>9</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>10</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>11</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>12</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	

**H- Healthy**



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**TABLE-2.3**  
**DAILY HEALTH RECORD OF THE GOATS**  
**(IN THE MONTH OF AUGUST, 2007)**  
**GROUP : CONTROL**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>Male</b>																														
<b>1</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>2</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>3</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>4</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>5</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>6</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>Female</b>																														
<b>7</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>8</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>9</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>10</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>11</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>12</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-2.4  
 DAILY HEALTH RECORD OF THE GOATS  
 (IN THE MONTH OF JUNE, 2007)  
 GROUP : NON-Bt COTTONSEEDS (SAMPLE-I)**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>Male</b>																														
13	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
14	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
15	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
16	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
17	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
18	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>Female</b>																														
19	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
20	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
21	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
22	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
23	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
24	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-2.5  
 DAILY HEALTH RECORD OF THE GOATS  
 (IN THE MONTH OF JULY, 2007)  
 GROUP : NON-Bt COTTONSEEDS (SAMPLE-I)**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<b>Male</b>																															
<b>13</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>14</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>15</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>16</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>17</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>18</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>Female</b>																															
<b>19</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>20</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>21</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>22</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>23</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
<b>24</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-2.6**  
**DAILY HEALTH RECORD OF THE GOATS**  
**(IN THE MONTH OF AUGUST, 2007)**  
**GROUP : NON-Bt COTTONSEEDS (SAMPLE-I)**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>Male</b>																														
<b>13</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>14</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>15</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>16</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>17</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>18</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>Female</b>																														
<b>19</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>20</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>21</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>22</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>23</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>24</b>	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-2.7**  
**DAILY HEALTH RECORD OF THE GOATS**  
**(IN THE MONTH OF JUNE, 2007)**  
**GROUP : Bt COTTONSEEDS (SAMPLE-II)**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<b>Male</b>																															
25	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
26	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
27	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
28	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
29	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
30	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>Female</b>																															
31	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
32	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
33	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
34	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
35	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
36	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-2.8  
 DAILY HEALTH RECORD OF THE GOATS  
 (IN THE MONTH OF JULY, 2007)  
 GROUP : Bt COTTONSEEDS (SAMPLE-II)**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
<b>Male</b>																															
25	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	
26	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
27	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
28	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
29	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
30	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>Female</b>																															
31	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
32	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
33	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
34	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
35	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
36	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-2.9  
 DAILY HEALTH RECORD OF THE GOATS  
 (IN THE MONTH OF AUGUST, 2007)  
 GROUP : Bt COTTONSEEDS (SAMPLE-II)**

Date	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>Male</b>																														
25	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
26	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
27	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
28	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
29	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
30	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
<b>Female</b>																														
31	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
32	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
33	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
34	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
35	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
36	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-3.1  
 MEAN WEEKLY BODY WEIGHT DATA OF MALE GOATS**

Week	Day 0	Day 7	Day 14	Day 21	Day 28	Day 35	Day 42	Day 49	Day 56	Day 63	Day 70	Day 77	Day 84	Day 91
<b>Control (Animal feed only)</b>	16.63 ± 0.92	16.96 ± 0.85	17.25 ± 0.61	17.38 ± 0.77	17.40 ± 0.91	17.25 ± 1.12	17.23 ± 1.3	17.35 ± 1.76	17.75 ± 1.6	17.78 ± 2.02	18.28 ± 1.98	18.21 ± 1.67	18.55 ± 1.48	18.80 ± 1.33
<b>Non-Bt Cotton-seeds (Sample-I)</b>	16.78 ± 0.94	16.98 ± 1.36	17.40 ± 1.50	17.57 ± 1.62	17.45 ± 1.65	17.43 ± 1.60	17.30 ± 1.53	17.77 ± 1.27	17.85 ± 1.36	18.10 ± 1.93	18.73 ± 2.14	18.58 ± 1.79	18.67 ± 1.79	18.98 ± 1.79
<b>Bt Cottonseeds (Sample-II)</b>	16.93 ± 0.86	17.03 ± 0.74	17.07 ± 0.60	17.43 ± 0.64	17.47 ± 0.69	17.50 ± 0.66	16.98 ± 0.83	16.73 ± 1.16	17.28 ± 1.44	17.82 ± 1.48	18.63 ± 1.38	18.45 ± 1.16	18.78 ± 1.02	18.98 ± 1.06

\* P = 0.05



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 DATE : 29.09.2007

**TABLE-3.2  
 MEAN WEEKLY BODY WEIGHT DATA OF FEMALE GOATS**

Week	Day 0	Day 7	Day 14	Day 21	Day 28	Day 35	Day 42	Day 49	Day 56	Day 63	Day 70	Day 77	Day 84	Day 91
<b>Control (Animal feed only)</b>	15.29 ± 3.64	15.37 ± 3.72	15.53 ± 3.82	15.74 ± 3.84	15.81 ± 3.82	15.70 ± 3.75	15.79 ± 3.73	15.78 ± 3.73	15.91 ± 3.84	16.03 ± 3.86	16.56 ± 3.95	16.45 ± 3.93	16.75 ± 4.03	17.02 ± 4.12
<b>Non-Bt Cotton-seeds (Sample-I)</b>	15.92 ± 0.84	15.80 ± 0.86	15.92 ± 1.31	16.20 ± 1.32	16.35 ± 1.13	16.53 ± 1.19	16.28 ± 1.10	16.08 ± 1.61	16.35 ± 1.27	16.72 ± 1.04	17.05 ± 1.22	17.02 ± 1.05	17.28 ± 1.05	17.48 ± 1.05
<b>Bt Cottonseeds (Sample-II)</b>	15.93 ± 0.85	15.83 ± 0.80	15.92 ± 0.77	16.07 ± 0.66	16.28 ± 0.85	15.95 ± 0.86	15.92 ± 0.92	15.82 ± 0.71	15.82 ± 0.87	15.82 ± 0.95	16.52 ± 0.85	16.67 ± 0.68	17.00 ± 0.75	17.13 ± 0.78

\* P = 0.05

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-3.3  
 CONTROL GROUP  
 BODY WEIGHTS (kg) OF THE GOATS ON WEEKLY INTERVAL**

Goat	Day 0	Day 7	Day 14	Day 21	Day 28	Day 35	Day 42	Day 49	Day 56	Day 63	Day 70	Day 77	Day 84	Day 91
1	16.0	16.3	16.8	16.5	16.7	15.8	16.2	16.0	16.5	16.0	16.1	16.5	17.0	17.4
2	16.4	16.8	17.5	18.1	17.8	18.0	18.5	19.5	19.5	20.5	20.7	20.2	20.0	19.8
3	16.8	17.0	17.3	17.5	17.0	17.2	16.0	15.3	16.1	15.8	16.6	16.8	17.2	17.7
4	18.0	18.4	18.0	18.3	18.5	18.3	19.0	19.1	19.5	19.5	20.3	20.0	20.4	20.6
5	17.2	17.3	17.6	17.4	18.2	18.2	17.5	18.0	18.5	18.6	19.0	18.8	19.1	19.5
6	15.4	16.0	16.3	16.5	16.2	16.0	16.2	16.2	16.4	16.3	17.0	17.0	17.6	17.8
<b>Mean</b>	<b>16.63</b>	<b>16.96</b>	<b>17.25</b>	<b>17.38</b>	<b>17.4</b>	<b>17.25</b>	<b>17.23</b>	<b>17.35</b>	<b>17.75</b>	<b>17.78</b>	<b>18.28</b>	<b>18.21</b>	<b>18.55</b>	<b>18.8</b>
<b>SD</b>	<b>0.92</b>	<b>0.85</b>	<b>0.61</b>	<b>0.77</b>	<b>0.91</b>	<b>1.12</b>	<b>1.30</b>	<b>1.76</b>	<b>1.60</b>	<b>2.02</b>	<b>1.98</b>	<b>1.67</b>	<b>1.48</b>	<b>1.33</b>
<b>Female</b>														
7	15.2	15.0	15.6	15.9	16.7	16.5	16.3	16.7	16.6	16.8	17.4	16.8	17.2	17.7
8	15.8	16.0	15.7	16.1	15.6	15.8	16.0	16.5	16.3	16.8	16.8	16.6	17.0	17.6
9	16.3	16.1	16.0	16.6	16.7	16.5	16.8	16.4	16.3	17.0	17.7	17.3	17.4	17.7
10	16.2	16.0	16.1	16.4	16.2	15.9	16.5	14.8	14.7	14.3	15.5	15.8	16.2	16.5
11	15.6	15.5	15.3	15.5	15.8	15.8	15.9	14.9	14.8	14.5	15.5	15.7	16.3	16.6
12	15.4	15.0	15.4	15.4	15.7	15.5	15.6	16.4	16.2	16.5	17.0	16.9	17.1	17.3
<b>Mean</b>	<b>15.29</b>	<b>15.37</b>	<b>15.53</b>	<b>15.74</b>	<b>15.81</b>	<b>15.70</b>	<b>15.79</b>	<b>15.78</b>	<b>15.91</b>	<b>16.03</b>	<b>16.56</b>	<b>16.45</b>	<b>16.75</b>	<b>17.02</b>
<b>SD</b>	<b>3.64</b>	<b>3.72</b>	<b>3.82</b>	<b>3.84</b>	<b>3.82</b>	<b>3.75</b>	<b>3.73</b>	<b>3.73</b>	<b>3.84</b>	<b>3.86</b>	<b>3.95</b>	<b>3.93</b>	<b>4.03</b>	<b>4.12</b>

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PROJECT NO. : TOX-346 GOAT  
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 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-3.4**  
**NON-Bt COTTONSEEDS (SAMPLE-I)**  
**BODY WEIGHTS (kg) OF THE GOATS ON WEEKLY INTERVAL**

Goat	Day 0	Day 7	Day 14	Day 21	Day 28	Day 35	Day 42	Day 49	Day 56	Day 63	Day 70	Day 77	Day 84	Day 91
<b>13</b>	18.0	19.3	19.9	20.5	20.3	20.1	20.0	20.1	19.8	20.2	20.6	20.5	20.7	19.0
<b>14</b>	17.3	17.2	18.0	17.7	17.2	16.8	17.0	16.5	17.1	16.9	18.1	18.2	17.8	16.4
<b>15</b>	16.0	16.6	17.0	17.5	17.3	18.0	17.9	17.9	18.0	18.4	18.9	18.8	19.0	17.1
<b>16</b>	17.2	17.0	17.5	17.3	17.7	17.7	16.9	17.8	18.9	20.0	21.0	20.2	20.3	18.6
<b>17</b>	15.4	15.1	15.5	15.6	15.2	15.4	15.5	16.8	16.0	15.1	15.0	15.5	15.8	14.0
<b>18</b>	16.8	16.7	16.5	16.8	17.0	16.6	16.5	17.5	17.3	18.0	18.8	18.3	18.4	16.8
<b>Mean</b>	<b>16.78</b>	<b>18.98</b>	<b>17.40</b>	<b>17.57</b>	<b>17.45</b>	<b>17.43</b>	<b>17.30</b>	<b>17.77</b>	<b>17.85</b>	<b>18.10</b>	<b>18.73</b>	<b>18.58</b>	<b>18.67</b>	<b>16.98</b>
<b>SD</b>	<b>0.94</b>	<b>1.36</b>	<b>1.50</b>	<b>1.62</b>	<b>1.65</b>	<b>1.60</b>	<b>1.53</b>	<b>1.27</b>	<b>1.36</b>	<b>1.93</b>	<b>2.14</b>	<b>1.79</b>	<b>1.79</b>	<b>1.79</b>
<b>Female</b>														
<b>19</b>	15.0	14.6	14.1	14.3	14.5	14.8	14.9	15.0	15.3	15.5	15.8	15.8	16.3	16.5
<b>20</b>	16.1	16.0	17.2	17.8	17.7	18.1	17.9	18.9	18.5	18.4	18.2	18.1	18.4	18.5
<b>21</b>	15.3	15.2	15.0	15.5	15.8	16.1	15.5	14.3	15.1	16.2	16.4	16.5	16.2	16.5
<b>22</b>	15.5	15.6	15.5	16.0	16.6	16.8	15.8	15.5	15.7	16.0	15.8	16.0	16.5	16.6
<b>23</b>	17.3	17.0	17.5	17.6	17.2	17.5	17.1	16.2	16.7	17.2	17.5	17.6	18.0	18.2
<b>24</b>	16.3	16.4	16.2	16.0	16.3	15.9	16.5	16.6	16.8	17.0	18.6	18.1	18.3	18.6
<b>Mean</b>	<b>15.92</b>	<b>15.8</b>	<b>15.92</b>	<b>16.20</b>	<b>16.35</b>	<b>16.53</b>	<b>16.28</b>	<b>16.08</b>	<b>16.35</b>	<b>16.72</b>	<b>17.05</b>	<b>17.02</b>	<b>17.28</b>	<b>17.48</b>
<b>SD</b>	<b>0.84</b>	<b>0.86</b>	<b>1.31</b>	<b>1.32</b>	<b>1.13</b>	<b>1.19</b>	<b>1.10</b>	<b>1.61</b>	<b>1.27</b>	<b>1.04</b>	<b>1.22</b>	<b>1.05</b>	<b>1.05</b>	<b>1.05</b>

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PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE-3.5**  
**Bt COTTONSEEDS (SAMPLE-II)**  
**BODY WEIGHTS (kg) OF THE GOATS ON WEEKLY INTERVAL**

Goat	Day 0	Day 7	Day 14	Day 21	Day 28	Day 35	Day 42	Day 49	Day 56	Day 63	Day 70	Day 77	Day 84	Day 91
<b>25</b>	16.8	17.0	17.4	17.5	16.6	16.4	16.0	15.4	15.2	15.7	17.1	17.2	17.6	17.8
<b>26</b>	16.7	16.9	17.3	17.8	17.6	17.5	16.2	15.9	16.2	16.5	17.2	17.4	17.6	17.9
<b>27</b>	18.0	18.0	17.5	17.9	18.2	18.1	17.8	17.5	17.6	18.7	20.1	19.8	20.0	20.3
<b>28</b>	16.4	16.2	16.0	16.3	16.9	17.2	16.6	15.8	17.1	17.6	18.0	17.7	18.6	18.5
<b>29</b>	15.8	16.3	16.7	17.1	17.2	17.6	17.4	18.1	19.0	19.0	19.3	19.0	19.4	19.6
<b>30</b>	17.9	17.8	17.5	18.0	18.3	18.2	17.9	17.7	18.6	19.4	20.1	19.6	19.5	19.8
<b>Mean</b>	<b>16.93</b>	<b>17.03</b>	<b>17.07</b>	<b>17.43</b>	<b>17.47</b>	<b>17.50</b>	<b>16.98</b>	<b>16.73</b>	<b>75.28</b>	<b>17.82</b>	<b>18.63</b>	<b>18.45</b>	<b>18.78</b>	<b>18.98</b>
<b>SD</b>	<b>0.86</b>	<b>0.74</b>	<b>0.60</b>	<b>0.64</b>	<b>0.69</b>	<b>0.66</b>	<b>0.83</b>	<b>1.16</b>	<b>1.44</b>	<b>1.48</b>	<b>1.38</b>	<b>1.16</b>	<b>1.02</b>	<b>1.06</b>
<b>Female</b>														
<b>31</b>	17.0	16.5	16.3	16.8	17.8	17.5	17.4	16.6	16.3	15.9	16.5	17.1	17.5	17.9
<b>32</b>	16.8	16.7	17.0	16.5	16.1	16.2	16.6	16.1	15.8	15.0	15.8	16.6	17.2	17.3
<b>33</b>	15.8	16.1	16.3	16.5	16.5	15.7	15.5	16.2	15.9	17.2	17.7	17.3	17.8	18.0
<b>34</b>	16.0	15.9	15.6	16.0	16.2	15.9	15.8	16.0	17.0	16.5	17.4	17.3	17.3	17.1
<b>35</b>	15.0	15.2	15.5	15.5	15.8	15.4	15.0	14.6	14.4	14.6	15.7	15.8	16.4	16.5
<b>36</b>	15.0	14.6	14.8	15.1	15.3	15.0	15.2	15.4	15.5	15.7	16.0	15.9	15.8	16.0
<b>Mean</b>	<b>15.93</b>	<b>15.83</b>	<b>15.92</b>	<b>16.07</b>	<b>16.28</b>	<b>15.95</b>	<b>15.92</b>	<b>15.82</b>	<b>15.82</b>	<b>15.82</b>	<b>16.52</b>	<b>16.67</b>	<b>17.00</b>	<b>17.13</b>
<b>SD</b>	<b>0.85</b>	<b>0.80</b>	<b>0.77</b>	<b>0.66</b>	<b>0.85</b>	<b>0.86</b>	<b>0.92</b>	<b>0.71</b>	<b>0.87</b>	<b>0.95</b>	<b>0.85</b>	<b>0.68</b>	<b>0.75</b>	<b>0.78</b>

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**PROJECT NO. : TOX-346 GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE : 4.1**  
**MEAN FEED CONSUMPTION DATA OF MALE GOATS**  
**(IN THE MONTH OF JUNE)**

Average feed consumption (In gms)			
DAYS	CONTROL	SAMPLE-I	SAMPLE-II
1	396.97?3.90	444.85?5.41	446.75?3.30
2	388.78?7.13	448.00?4.00	445.10?3.99
3	387.48?3.04	446.55?3.39	443.30?5.42
4	396.93?3.97	446.58?5.35	444.30?4.10
5	391.07?7.17	442.27?5.62	443.75?2.60
6	392.92?8.16	441.48?4.14	445.18?4.26
7	389.62?6.11	443.13?4.13	446.13?3.68
8	390.67?5.29	441.62?4.28	447.17?3.91
9	396.17?5.66	442.93?5.56	442.50?5.07
10	391.80?7.16	445.22?5.46	445.42?4.73
11	395.10?7.59	443.52?4.13	443.18?3.40
12	395.22?7.41	442.93?5.54	443.57?3.61
13	386.33?2.14	442.13?6.27	444.97?3.55
14	393.50?5.74	441.58?6.81	444.60?4.26
15	387.03?2.38	444.75?6.91	441.88?4.09
16	390.92?7.94	442.20?6.51	445.80?4.11
17	387.20?2.57	443.70?7.14	445.42? 4.73
18	387.87?4.32	440.15?6.15	443.33?4.54
19	391.22?7.11	444.87?6.48	442.15?4.09
20	388.08?2.70	447.00?1.48	443.10?2.73
21	391.25?7.06	442.33?5.94	445.00?3.51
22	395.23?7.39	443.48?6.17	444.30?5.18
23	393.50?7.31	443.50?7.31	445.80?4.11
24	389.47?6.17	442.47?5.98	444.08?5.44
25	390.25?5.95	443.92?6.18	443.33?4.54
26	392.40?6.73	443.23?5.45	441.82?2.51
27	392.20?6.02	439.57?5.35	442.15?2.26
28	394.35?6.91	439.65?5.47	444.42?2.7
29	397.13?4.44	439.83?5.54	443.55?2.30
30	393.70?6.77	445.42?6.04	446.58?1.83

(Contd)



PROJECT NO. : TOX-346 GOAT  
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 REPORT NO. : 000061486  
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**TABLE:4.1(Contd)**  
**MEAN FEED CONSUMPTION DATA OF MALE GOATS**  
**(IN THE MONTH OF JULY)**

DAYS	AVERAGE FEED CONSUMPTION (IN GMS)		
	CONTROL	SAMPLE-I	SAMPLE-II
1	397.05?3.23	442.33?6.02	449.25?1.84
2	399.02?2.41	446.83?4.30	450.00?0.00
3	394.85?5.64	447.58?1.88	442.53?5.06
4	395.20?3.33	443.02?5.64	446.92?4.47
5	398.05?1.65	441.98?5.50	444.33?5.15
6	393.57?4.14	440.05?5.35	444.73?4.85
7	393.42?4.08	444.70?6.03	446.25?4.67
8	396.48?5.60	445.50?6.03	445.97?5.13
9	397.87?3.59	442.38?5.51	446.43?4.11
10	396.87?5.86	445.00?5.50	444.33?5.15
11	398.60?2.17	443.60?4.60	443.83?4.85
12	392.65?5.57	447.75?4.05	445.42?4.73
13	392.77?4.71	444.65?4.81	443.33?4.95
14	396.88?4.08	446.83?4.92	445.50?4.54
15	392.73?5.36	446.65?4.11	443.30?3.42
16	397.48?2.06	442.13?4.50	444.17?4.06
17	394.88?5.46	448.83?1.81	443.55?5.02
18	394.02?3.45	444.62?6.25	447.17?4.48
19	395.43?3.29	445.77?4.67	448.17?2.02
20	396.75?3.82	447.60?2.99	444.93?5.75
21	395.43?3.46	448.25?1.92	444.25?5.54
22	394.03?5.14	441.78?4.50	442.47?6.11
23	396.43?4.69	443.52?5.19	446.97?4.70
24	392.02?3.00	446.35?4.51	446.00?5.09
25	397.48?2.06	445.08?5.46	444.13?4.68
26	393.88?4.01	447.60?2.99	445.42?4.73
27	393.60?2.41	441.83?5.06	442.68?4.70
28	396.22?1.00	444.75?6.91	447.17?3.91
29	394.98?2.99	443.42?7.27	444.12?4.81
30	396.62?2.12	448.77?3.02	446.25?4.67
31	397.05?3.23	441.10?4.66	447.33?3.54



PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
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**TABLE:4.1(Contd)**  
**MEAN FEED CONSUMPTION DATA OF MALE GOATS**  
**(IN THE MONTH OF AUGUST)**

DAYS	AVERAGE FEED CONSUMPTION (IN GMS)		
	CONTROL	SAMPLE-I	SAMPLE-II
1	394.92?3.96	442.15?4.07	445.30?4.75
2	389.40?8.45	444.72?4.70	446.58?5.35
3	388.85?3.91	445.80?4.11	446.68? 4.05
4	395.27?4.49	442.53?5.06	442.02?5.51
5	395.85?6.57	448.25?1.92	448.83?1.81
6	393.90?6.48	441.75?4.74	443.90?7.73
7	392.02?6.98	446.38?4.46	446.92?2.40
8	393.07?6.51	447.08?3.67	443.93?6.84
9	391.05?6.41	448.00?2.26	443.67?7.22
10	395.18?5.47	443.12?4.06	441.25?6.08
11	396.82?5.88	441.72?4.15	443.25?6.51
12	394.23?7.03	444.27?3.94	445.52?4.45
13	393.20?6.87	443.92?4.40	447.75?4.05
14	392.87?6.66	442.75?3.64	444.65?4.81
15	390.07?5.99	442.87?3.68	446.83?4.92
16	391.22?5.68	443.47?2.83	446.65?4.11
17	396.37?0.88	444.83?2.02	442.13? 4.50
18	396.27?0.96	443.23?4.25	447.60?2.99
19	395.17?3.93	446.25?4.67	444.62? 6.25
20	398.60?2.17	447.30?3.62	447.00?4.65
21	396.57?5.32	443.12?5.76	448.83?1.81
22	391.73?3.15	448.00?2.26	443.97? 5.42
23	396.37?0.88	442.37?5.13	448.50? 3.67
24	396.27?0.96	445.77?4.69	448.18? 3.07
25	395.17?3.93	447.33?3.54	442.60? 6.22
26	398.60?2.17	447.33?3.54	448.75? 1.94
27	396.57?5.32	445.03?4.60	443.55? 7.11
28	391.73?3.15	444.17?5.30	448.77? 3.02
29	392.80?7.89	444.43?5.06	446.07? 6.20
30	400.00?0.00	444.25?4.92	448.50? 2.32



PROJECT NO. : TOX-346 GOAT  
 PRODUCT : B1 COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
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**TABLE:4.2**  
**MEAN FEED CONSUMPTION DATA OF FEMALE GOATS**  
**(IN THE MONTH OF JUNE)**

DAYS	AVERAGE FEED CONSUMPTION (IN GMS)		
	CONTROL	SAMPLE-I	SAMPLE-II
1	393.70?4.13	443.42?6.28	442.63?4.55
2	386.82?8.58	442.83?4.83	443.65?3.81
3	387.38?3.11	448.08?2.13	443.92?4.40
4	393.60?4.23	445.50?5.64	443.00?3.33
5	397.57?5.96	444.80?6.69	441.33?1.18
6	389.90?6.34	443.93?7.13	442.80?2.87
7	389.98?6.84	441.98?5.50	444.10?2.25
8	396.22?6.11	437.78?2.32	446.58?3.65
9	387.17?4.23	439.88?5.55	446.10?3.73
10	396.35?2.90	440.92?6.10	444.08?5.44
11	395.52?6.24	445.75?5.15	443.92?5.56
12	392.80?8.67	445.82?6.51	446.07?4.37
13	392.87?6.75	444.50?7.14	446.72?4.01
14	392.52?6.62	447.33?5.61	444.93?3.32
15	390.97?7.23	445.85?5.65	442.98?3.13
16	389.73?5.60	443.95?4.94	444.3?4.90
17	388.82?5.87	440.60?4.99	445.38?2.97
18	391.92?6.54	440.60?5.30	443.30?1.97
19	387.13?2.54	444.08?5.66	445.22?4.21
20	393.55?5.69	442.85?5.98	447.38?3.10
21	388.70?5.85	444.85?3.71	447.92?3.67
22	390.50?6.34	444.78?4.62	444.40?5.77
23	385.57?0.20	440.82?3.07	446.00?5.09
24	394.27?6.48	441.22?5.69	443.40?2.82
25	394.53?7.03	443.62?5.60	445.72?3.98
26	388.52?4.85	445.28?5.18	446.47?3.44
27	390.67?6.18	445.95?5.16	445.50?4.93
28	394.92?5.77	444.58?5.16	447.67?1.81
29	391.30?7.12	445.37?4.78	446.75?3.30
30	398.32?2.66	446.15?5.96	446.00?3.46

(Contd)





PROJECT NO. : TOX-346 GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE:4.2(Contd)**  
**MEAN FEED CONSUMPTION DATA OF FEMALE GOATS**  
**(IN THE MONTH OF JULY)**

DAYS	AVERAGE FEED CONSUMPTION (IN GMS)		
	CONTROL	SAMPLE-I	SAMPLE-II
1	397.90?2.30	445.27?5.31	448.50?2.32
2	396.40?5.29	442.50?5.58	450.00?0.00
3	390.95?5.23	446.85? .05	444.17?5.13
4	395.50?5.27	446.42? .43	445.25?5.39
5	394.48?4.86	445.75? 6.63	446.67?3.31
6	396.87?5.86	447.53? 3.82	444.35?5.29
7	397.17?4.05	443.15? 6.51	443.67?497
8	397.45?3.43	441.80? .63	440.55?4.97
9	396.47?3.40	446.17? 6.15	446.97?4.70
10	396.88?3.69	445.58? 5.87	447.67?3.83
11	395.23?6.10	448.83? 1.81	446.68?4.05
12	392.05? 6.04	447.50? 4.63	446.58?3.34
13	395.28?5.10	446.27? 4.81	445.68?4.47
14	393.17?4.71	446.42?5.57	446.25?3.70
15	396.05?2.81	448.47? 3.76	446.55?5.39
16	395.25? 2.03	446.03?4.38	446.42?4.41
17	395.288?2.82	446.37? 3.31	442.73?5.61
18	397.77?1.89	443.12? 5.76	445.42?4.73
19	395.17?4.30	444.62? 5.36	441.18?3.04
20	398.18?2.08	445.58?5.87	445.63?4.35
21	392.55?4.57	446.27?4.81	444.47?5.03
22	396.75?3.23	446.25? 4.67	446.00?5.09
23	395.48?3.46	444.73? 4.85	446.35?3.00
24	397.87?3.59	446.25?4.67	445.33?5.13
25	393.73?4.62	444.73? 4.85	447.30?3.62
26	396.47?3.22	443.37? 5.55	447.33?3.54
27	395.32?4.46	445.55? 5.90	446.08?4.24
28	392.58?2.58	442.70? 6.23	444.58?4.84
29	396.60?0.99	448.83?1.81	445.15?4.29
30	394.17?2.39	444.03? 5.79	445.08?3.51
31	395.67? 2.43	441.93?4.26	446.75?3.30



**PROJECT NO. : TOX-346 GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.2(Contd)**  
**MEAN FEED CONSUMPTION DATA OF FEMALE GOATS**  
**(IN THE MONTH OF AUGUST)**

<b>AVERAGE FEED CONSUMPTION (IN GMS)</b>			
<b>DAYS</b>	<b>CONTROL</b>	<b>SAMPLE-I</b>	<b>SAMPLE-II</b>
1	396.78?1.72	444.42?5.46	445.88?5.12
2	397.02?1.71	445.68?4.14	448.50?3.67
3	395.40?3.90	445.08?5.46	448.18?3.07
4	398.18?2.08	444.17?4.11	440.93?5.07
5	397.53?4.24	441.25?5.30	447.33?2.14
6	391.45?2.76	446.97?4.70	443.23?6.18
7	398.75?1.37	447.92?3.67	446.08?3.44
8	397.75?2.46	446.25?3.43	448.18?3.07
9	394.80?0.77	445.42?4.73	445.48?5.91
10	394.58?3.78	446.92?4.47	443.08?5.01
11	389.73?8.78	446.33?4.20	445.05?5.49
12	389.08?4.31	444.38?5.28	446.68?4.05
13	394.28?3.85	445.83?4.25	447.17?3.91
14	397.15?5.84	443.07?4.37	441.85?4.69
15	393.85?6.46	443.38?5.20	446.25?4.67
16	391.45?6.57	445.55?4.10	443.70?5.93
17	393.82?7.08	443.62?4.70	446.63?4.02
18	392.03?7.36	448.00?2.26	449.42?1.43
19	395.60?5.77	443.78?5.70	446.85?5.05
20	397.578?5.96	446.83?4.92	442.90?5.72
21	394.80?7.16	447.30?3.62	447.25?2.16
22	392.87?6.66	446.00?5.09	444.43?5.06
23	392.63?6.58	444.20?3.93	445.08?5.46
24	391.05?7.15	443.33?4.54	447.33?3.54
25	391.97?6.59	444.32?3.59	442.48?5.42
26	397.92?1.02	444.50?5.00	448.25?1.92
27	396.25?1.84	448.33?4.08	441.98?6.26
28	392.68?3.47	448.47?3.76	450.00?0.00
29	395.20?7.44	447.92?3.67	450.00?0.00
30	399.25?1.84	444.17?2.84	450.00?0.00



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**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.3**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**CONTROL GROUP**  
**(IN THE MONTH OF JUNE)**

Animal ID	1M	2M	3M	4M	5M	6M	7F	8F	9F	10F	11F	12F	
Days	Total feed Wt (gm) (Conc entrate )	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	
1	400	390.2	400.0	395.8	400.0	400.0	395.8	390.2	395.8	390.2	390.2	400.0	395.8
2	400	380.0	385.9	397.5	385.9	385.9	397.5	380.0	397.5	380.0	380.0	385.9	397.5
3	400	385.3	385.6	391.4	385.6	385.6	391.4	385.3	391.4	385.3	385.3	385.6	391.4
4	400	390.0	400.0	395.8	400.0	400.0	395.8	390.0	395.8	390.0	390.0	400.0	395.8
5	400	400.0	385.4	390.2	385.4	385.4	400.0	400.0	400.0	400.0	400.0	385.4	400.0
6	400	385.9	400.0	380.0	395.8	395.8	400.0	385.9	400.0	385.9	385.9	395.8	385.9
7	400	385.6	385.9	385.3	397.5	397.5	385.9	385.6	400.0	385.6	385.6	397.5	385.6
8	400	400.0	385.6	390.0	391.4	391.4	385.6	400.0	385.9	400.0	400.0	391.4	400.0
9	400	385.4	400.0	400.0	395.8	395.8	400.0	385.4	385.6	385.4	385.4	395.8	385.4
10	400	394.1	385.4	385.9	400.0	400.0	385.4	394.1	400.0	394.1	394.1	400.0	395.8
11	400	385.0	400.0	385.6	400.0	400.0	400.0	400.0	385.4	400.0	400.0	390.2	397.5
12	400	400.0	400.0	400.0	385.4	400.0	385.9	400.0	400.0	385.4	400.0	380.0	391.4
13	400	385.5	385.4	385.4	390.7	385.4	385.6	400.0	400.0	390.7	385.4	385.3	395.8
14	400	400.0	390.7	394.1	385.5	390.7	400.0	385.5	400.0	385.5	394.1	390.0	400.0
15	400	385.6	385.5	390.2	390.0	385.5	385.4	400.0	385.4	390.0	385.0	400.0	385.4
16	400	400.0	390.0	380.0	385.5	390.0	400.0	385.6	390.7	385.5	400.0	385.9	390.7
17	400	385.9	385.5	385.3	390.8	385.5	390.2	400.0	385.5	390.8	385.5	385.6	385.5
18	400	390.0	390.8	390.0	385.6	390.8	380.0	385.9	390.0	385.6	400.0	400.0	390.0
19	400	400.0	385.6	400.0	390.8	385.6	385.3	390.0	385.5	390.8	385.6	385.4	385.5
20	400	385.4	390.8	385.9	385.6	390.8	390.0	400.0	390.8	385.6	400.0	394.1	390.8
21	400	390.7	385.6	385.6	400.0	385.6	400.0	385.4	385.6	400.0	385.4	390.2	385.6
22	400	385.5	400.0	400.0	400.0	400.0	385.9	390.7	390.8	400.0	390.7	380.0	390.8
23	400	390.0	400.0	385.4	400.0	400.0	385.6	385.5	385.6	385.9	385.5	385.3	385.6
24	400	385.5	385.9	394.1	385.4	385.9	400.0	400.0	400.0	385.6	390.0	390.0	400.0
25	400	390.8	385.6	400.0	394.1	385.6	385.4	385.9	395.8	400.0	385.5	400.0	400.0
26	400	385.6	400.0	389.7	385.0	400.0	394.1	385.6	397.5	385.4	390.8	385.9	385.9
27	400	390.8	385.4	395.8	400.0	385.4	395.8	400.0	391.4	395.8	385.6	385.6	385.6
28	400	385.6	400.0	397.5	385.5	400.0	397.5	385.4	395.8	397.5	390.8	400.0	400.0
29	400	400.0	400.0	391.4	400.0	400.0	391.4	400.0	400.0	391.4	385.6	385.4	385.4
30	400	385.0	400.0	395.8	385.6	400.0	395.8	400.0	400.0	395.8	400.0	394.1	400.0

(Contd)



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**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.3(Contd)**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**CONTROL GROUP**  
**(IN THE MONTH OF JULY)**

Animal ID	1M	2M	3M	4M	5M	6M	7F	8F	9F	10F	11F	12F	
Days	Total feed Wt (gm) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	Feed consumed (gms) (Concentrate)	
1	400	400.0	394.1	394.1	400.0	400.0	394.1	395.8	400.0	400.0	395.8	400.0	395.8
2	400	394.1	400.0	400.0	400.0	400.0	400.0	397.5	385.9	400.0	397.5	400.0	397.5
3	400	400.0	389.7	389.7	400.0	400.0	389.7	391.4	385.6	400.0	391.4	385.9	391.4
4	400	389.7	395.8	395.8	394.1	400.0	395.8	395.8	400.0	400.0	395.8	385.6	395.8
5	400	395.8	397.5	397.5	400.0	400.0	397.5	395.8	385.4	394.1	395.8	400.0	395.8
6	400	397.5	391.4	391.4	389.7	400.0	391.4	400.0	395.8	400.0	400.0	385.4	400.0
7	400	391.4	395.8	395.8	395.8	385.9	395.8	400.0	397.5	389.7	400.0	395.8	400.0
8	400	395.8	400.0	400.0	397.5	385.6	400.0	400.0	391.4	395.8	400.0	397.5	400.0
9	400	395.8	400.0	400.0	391.4	400.0	400.0	400.0	395.8	397.5	400.0	391.4	394.1
10	400	400.0	400.0	400.0	395.8	385.4	400.0	394.1	400.0	391.4	400.0	395.8	400.0
11	400	400.0	400.0	400.0	395.8	395.8	400.0	400.0	400.0	395.8	385.9	400.0	389.7
12	400	385.4	395.5	385.9	397.5	397.5	394.1	389.7	385.4	395.8	385.6	400.0	395.8
13	400	394.1	394.1	385.6	391.4	391.4	400.0	395.8	395.5	397.5	400.0	385.4	397.5
14	400	400.0	400.0	400.0	395.8	395.8	389.7	397.5	397.5	391.4	385.4	395.8	391.4
15	400	389.7	389.7	385.4	395.8	400.0	395.8	391.4	400.0	395.8	395.8	397.5	395.8
16	400	395.8	395.8	395.8	400.0	400.0	397.5	395.8	395.5	395.8	397.5	391.4	395.5
17	400	397.5	397.5	397.5	400.0	385.4	391.4	395.8	394.1	400.0	391.4	395.8	394.6
18	400	391.4	391.4	391.4	394.1	400.0	395.8	397.5	400.0	400.0	395.8	395.8	397.5
19	400	395.8	395.8	395.8	400.0	389.7	395.5	391.4	389.7	395.8	400.0	400.0	394.1
20	400	400.0	397.5	400.0	389.7	395.8	397.5	395.8	395.8	397.5	400.0	400.0	400.0
21	400	389.7	394.1	400.0	395.8	397.5	395.5	395.8	397.5	391.4	385.4	395.5	389.7
22	400	395.8	400.0	385.4	397.5	391.4	394.1	400.0	391.4	395.8	400.0	397.5	395.8
23	400	397.5	389.7	400.0	391.4	400.0	400.0	400.0	395.8	395.8	389.7	394.1	397.5
24	400	391.4	395.8	389.7	395.8	389.7	389.7	400.0	400.0	400.0	395.8	400.0	391.4
25	400	400.0	397.5	395.8	400.0	395.8	395.8	389.7	389.7	400.0	397.5	389.7	395.8
26	400	389.7	391.4	397.5	389.7	397.5	397.5	395.8	395.8	400.0	391.4	395.8	400.0
27	400	395.8	395.8	391.4	395.8	391.4	391.4	397.5	397.5	389.7	400.0	397.5	389.7
28	400	397.5	395.5	395.5	397.5	395.5	395.8	391.4	391.4	395.8	389.7	391.4	395.8
29	400	391.4	397.5	397.5	391.4	397.5	394.6	395.5	397.5	397.5	395.8	395.8	397.5
30	400	397.5	394.6	400.0	394.6	395.5	397.5	394.6	394.6	391.4	397.5	395.5	391.4
31	400	394.6	397.5	395.5	400.0	394.6	394.6	397.5	394.6	397.5	391.4	397.5	395.5



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**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.3(Contd)**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**CONTROL GROUP**  
**(IN THE MONTH OF AUGUST)**

Animal ID	1M	2M	3M	4M	5M	6M	7F	8F	9F	10F	11F	12F	
Days	Total feed Wt (gm) (Conc entrate )	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	Feed consu med (gms) (Conce ntrate)	
1	400	400.0	395.8	390.2	395.8	390.2	397.5	395.8	395.8	400.0	397.5	395.8	395.8
2	400	385.9	397.5	380.0	397.5	380.0	395.5	395.8	397.5	400.0	395.5	395.8	397.5
3	400	385.6	391.4	385.3	391.4	385.3	394.1	400.0	391.4	395.5	394.1	400.0	391.4
4	400	400.0	395.8	390.0	395.8	390.0	400.0	400.0	395.8	397.5	400.0	400.0	395.8
5	400	385.4	400.0	400.0	400.0	400.0	389.7	400.0	400.0	395.5	389.7	400.0	400.0
6	400	395.8	400.0	385.9	400.0	385.9	395.8	389.7	389.7	394.1	395.8	389.7	389.7
7	400	397.5	385.9	385.6	400.0	385.6	397.5	400.0	397.5	400.0	397.5	400.0	397.5
8	400	391.4	385.6	400.0	385.9	400.0	395.5	400.0	395.5	400.0	395.5	400.0	395.5
9	400	395.8	400.0	385.4	385.6	385.4	394.1	395.5	394.1	395.5	394.1	395.5	394.1
10	400	400.0	385.4	394.1	400.0	394.1	397.5	400.0	395.8	390.2	395.8	390.2	395.5
11	400	400.0	400.0	400.0	385.4	400.0	395.5	385.9	397.5	380.0	397.5	380.0	397.5
12	400	400.0	385.9	400.0	400.0	385.4	394.1	385.6	391.4	385.3	391.4	385.3	395.5
13	400	385.4	385.6	400.0	400.0	390.7	397.5	400.0	395.8	390.0	395.8	390.0	394.1
14	400	390.7	400.0	385.5	400.0	385.5	395.5	385.4	400.0	400.0	400.0	400.0	397.5
15	400	385.5	385.4	400.0	385.4	390.0	394.1	395.8	400.0	385.9	400.0	385.9	395.5
16	400	390.0	400.0	385.6	390.7	385.5	395.5	397.5	385.9	385.6	400.0	385.6	394.1
17	400	397.5	395.8	395.8	397.5	395.8	395.8	391.4	385.6	400.0	385.9	400.0	400.0
18	400	395.5	395.8	397.5	395.5	395.8	397.5	395.8	400.0	385.4	385.6	385.4	400.0
19	400	394.1	400.0	391.4	394.1	400.0	391.4	400.0	385.4	394.1	400.0	394.1	400.0
20	400	400.0	400.0	395.8	400.0	400.0	395.8	400.0	400.0	400.0	385.4	400.0	400.0
21	400	389.7	400.0	400.0	389.7	400.0	400.0	400.0	385.9	400.0	400.0	385.4	397.5
22	400	395.8	389.7	389.7	395.8	389.7	389.7	385.4	385.6	400.0	400.0	390.7	395.5
23	400	397.5	395.8	395.8	397.5	395.8	395.8	390.7	400.0	385.5	400.0	385.5	394.1
24	400	395.5	395.8	397.5	395.5	395.8	397.5	385.5	385.4	400.0	385.4	390.0	400.0
25	400	394.1	400.0	391.4	394.1	400.0	391.4	390.0	400.0	385.6	390.7	385.5	400.0
26	400	400.0	400.0	395.8	400.0	400.0	395.8	397.5	397.5	400.0	397.5	397.5	397.5
27	400	389.7	400.0	400.0	389.7	400.0	400.0	395.5	395.5	400.0	395.5	395.5	395.5
28	400	395.8	389.7	389.7	395.8	389.7	389.7	394.1	394.1	385.6	394.1	394.1	394.1
29	400	400.0	400.0	385.6	400.0	385.6	385.6	400.0	385.6	400.0	400.0	400.0	385.6
30	400	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	395.5	400.0	400.0	400.0

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**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.4**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**GROUP : NON-Bt COTTONSEEDS (SAMPLE-I)**  
**(IN THE MONTH OF JUNE)**

Animal ID	13M	14M	15M	16M	17M	18M	19F	20F	21F	22F	23F	24F	
Days	Total feed Wt (gm) (Conce ntrate+s ampl;el ) (400 +50)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	
1	450	445.5	450.0	442.6	450.0	435.5	445.5	435.5	446.5	450.0	435.5	446.5	446.5
2	450	450.0	450.0	440.0	450.0	448.0	450.0	448.0	438.5	445.5	448.0	438.5	438.5
3	450	446.0	450.0	440.8	450.0	446.5	446.0	446.5	450.0	450.0	446.5	450.0	445.5
4	450	450.0	450.0	441.0	450.0	438.5	450.0	438.5	450.0	446.0	438.5	450.0	450.0
5	450	442.6	435.5	446.5	450.0	436.4	442.6	436.4	450.0	450.0	436.4	450.0	446.0
6	450	440.0	448.0	442.8	442.6	435.5	440.0	435.5	450.0	442.6	435.5	450.0	450.0
7	450	440.8	446.5	440.7	440.0	450.0	440.8	436.4	436.4	440.0	446.5	450.0	442.6
8	450	441.0	438.5	438.4	440.8	450.0	441.0	435.5	435.5	440.8	438.5	436.4	440.0
9	450	446.5	436.4	437.2	441.0	450.0	446.5	436.0	436.0	441.0	450.0	435.5	440.8
10	450	442.8	435.5	450.0	446.5	450.0	446.5	436.0	436.0	446.5	450.0	436.0	441.0
11	450	440.7	446.5	450.0	442.8	442.6	438.5	445.5	450.0	446.5	450.0	436.0	446.5
12	450	438.4	438.5	450.0	440.7	440.0	450.0	450.0	450.0	438.5	450.0	450.0	436.4
13	450	437.2	450.0	436.4	438.4	440.8	450.0	446.0	450.0	450.0	435.5	450.0	435.5
14	450	435.8	450.0	435.5	437.2	441.0	450.0	450.0	450.0	450.0	448.0	450.0	436.0
15	450	436.0	450.0	436.0	450.0	446.5	450.0	442.6	450.0	450.0	446.5	450.0	436.0
16	450	438.0	450.0	436.0	450.0	442.8	436.4	440.0	442.6	450.0	438.5	442.6	450.0
17	450	436.0	450.0	450.0	450.0	440.7	435.5	440.8	440.0	436.4	436.4	440.0	450.0
18	450	435.5	435.5	445.5	450.0	438.4	436.0	441.0	440.8	435.5	435.5	440.8	450.0
19	450	448.0	448.0	450.0	450.0	437.2	436.0	446.5	441.0	436.0	450.0	441.0	450.0
20	450	446.5	446.5	446.0	446.5	446.5	450.0	442.6	446.5	436.0	450.0	446.5	435.5
21	450	438.5	438.5	450.0	438.5	438.5	450.0	440.0	442.8	445.5	450.0	442.8	448.0
22	450	436.4	436.4	442.6	450.0	445.5	450.0	440.8	440.7	450.0	450.0	440.7	446.5
23	450	435.5	435.5	440.0	450.0	450.0	450.0	441.0	438.4	446.0	442.6	438.4	438.5
24	450	436.0	446.5	440.8	450.0	446.0	435.5	446.5	437.2	450.0	440.0	437.2	436.4
25	450	436.0	438.5	441.0	450.0	450.0	448.0	442.8	450	442.6	440.8	450.0	435.5
26	450	437.4	450.0	446.5	436.4	442.6	446.5	440.7	450	440.0	441.0	450.0	450.0
27	450	437.0	450.0	436.4	435.5	440.0	438.5	438.4	450	440.8	446.5	450.0	450.0
28	450	439.2	450.0	435.5	436.0	440.8	436.4	437.2	450	441.0	442.8	446.5	450.0
29	450	440.5	450.0	436.0	436.0	441.0	435.5	450.0	446.5	446.5	440.7	438.5	450.0
30	450	440.0	450.0	436.0	450.0	446.5	450.0	450.0	438.5	450.0	438.4	450.0	450.0

(Contd)

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PROJECT NO. : TOX-346GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

**TABLE:4.4(Contd)**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**GROUP : NON-Bt COTTONSEEDS (SAMPLE-I)**  
**(IN THE MONTH OF JULY)**

Animal ID	13M	14M	15M	16M	17M	18M	19F	20F	21F	22F	23F	24F	
Days	Total feed Wt (gm) (Concent rate+sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	Feed consu med (gms) (Conce ntrate+ sample I)	
1	450	450.0	441.0	446.5	435.5	445.5	435.5	446.5	450.0	450.0	436.0	446.5	442.6
2	450	450.0	446.5	438.5	448.0	450.0	448.0	438.5	445.5	450.0	436.0	438.5	446.5
3	450	450.0	446.5	450.0	446.5	446.0	446.5	450.0	450.0	450.0	450.0	442.6	438.5
4	450	442.6	438.5	450.0	438.5	450.0	438.5	450.0	446.0	450.0	436.0	446.5	450.0
5	450	440.0	450.0	446.5	436.4	442.6	436.4	450.0	450.0	450.0	436.0	438.5	450.0
6	450	440.8	450.0	438.5	435.5	440.0	435.5	450.0	442.6	450.0	450.0	450.0	442.6
7	450	441.0	450.0	450.0	450.0	440.8	436.4	436.4	440.0	450.0	436.0	450.0	446.5
8	450	446.5	450.0	450.0	450.0	441.0	435.5	435.5	440.8	450.0	436.0	450.0	438.5
9	450	442.8	436.4	442.6	450.0	446.5	436.0	436.0	441.0	450.0	450.0	450.0	450.0
10	450	446.5	450.0	441.0	450.0	446.5	436.0	436.0	446.5	450.0	450.0	441.0	450.0
11	450	438.5	450.0	446.5	442.6	438.5	445.5	450.0	446.5	450.0	450.0	446.5	450.0
12	450	450.0	450.0	446.5	440.0	450.0	450.0	450.0	438.5	450.0	450.0	446.5	450.0
13	450	450.0	442.6	438.5	440.8	450.0	446.0	450.0	450.0	450.0	442.6	438.5	446.5
14	450	450.0	440.0	450.0	441.0	450.0	450.0	450.0	450.0	450.0	440.0	450.0	438.5
15	450	450.0	440.8	450.0	446.5	450.0	442.6	450.0	450.0	450.0	440.8	450.0	450.0
16	450	442.6	441.0	450.0	442.8	436.4	440.0	442.6	450.0	442.6	441.0	450.0	450.0
17	450	450.0	446.5	450.0	450.0	446.5	450.0	442.6	442.6	446.5	446.5	450.0	450.0
18	450	450.0	442.8	436.4	450.0	438.5	450.0	450.0	441.0	438.5	442.8	436.4	450.0
19	450	442.6	450.0	441.0	450.0	450.0	441.0	450.0	446.5	442.6	442.6	450.0	436.0
20	450	442.6	450.0	446.5	450.0	450.0	446.5	450.0	446.5	450.0	441.0	450.0	436.0
21	450	446.5	450.0	446.5	450.0	450.0	446.5	442.6	438.5	450.0	446.5	450.0	450.0
22	450	438.5	442.6	438.5	450.0	442.6	438.5	440.0	450.0	450.0	446.5	450.0	441.0
23	450	442.6	440.0	450.0	438.5	440.0	450.0	440.8	450.0	442.6	438.5	450.0	446.5
24	450	450.0	440.8	450.0	446.5	440.8	450.0	441.0	450.0	440.0	450.0	450.0	446.5
25	450	450.0	441.0	450.0	438.5	441.0	450.0	446.5	450.0	440.8	450.0	442.6	438.5
26	450	442.6	446.5	450.0	450.0	446.5	450.0	442.8	436.4	441.0	450.0	440.0	450.0
27	450	442.6	442.8	436.4	450.0	442.8	436.4	450.0	436.0	446.5	450.0	440.8	450.0
28	450	450.0	446.5	450.0	436.0	450.0	436.0	450.0	436.0	442.8	436.4	441.0	450.0
29	450	450.0	438.5	450.0	436.0	450.0	436.0	450.0	450.0	450.0	446.5	446.5	450.0
30	450	442.6	450.0	450.0	450.0	450.0	450.0	446.5	450.0	450.0	438.5	442.8	436.4
31	400	438.5	450.0	438.5	442.6	438.5	438.5	438.5	450.0	442.6	441.0	441.0	438.5



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**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.4(Contd)**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**GROUP : NON-Bt COTTONSEEDS (SAMPLE-I)**  
**(IN THE MONTH OF AUGUST)**

Animal ID	13M	14M	15M	16M	17M	18M	19F	20F	21F	22F	23F	24F	
Days	Total feed Wt (gm) (Concentration+sample I) (400+50)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	Feed consumed (gms) (Concentration+sample I)	
1	450	440.0	442.6	438.5	440.8	450.0	441.0	450.0	440.0	438.5	448.0	450.0	440.0
2	450	440.8	440.0	450.0	441.0	450.0	446.5	450.0	440.8	450.0	446.5	446.0	440.8
3	450	441.0	440.8	450.0	446.5	450.0	446.5	450.0	441.0	450.0	438.5	450.0	441.0
4	450	446.5	441.0	450.0	442.8	436.4	438.5	446.5	446.5	446.5	436.4	442.6	446.5
5	450	446.5	446.5	450.0	450.0	446.5	450.0	438.5	445.0	438.5	435.5	440.0	450.0
6	450	442.8	442.8	436.4	450.0	438.5	440.0	441.0	450.0	450.0	450.0	440.8	450.0
7	450	446.5	450.0	441.0	450.0	450.0	440.8	446.5	450.0	450.0	450.0	441.0	450.0
8	450	445.0	450.0	446.5	450.0	450.0	441.0	446.5	450.0	441.0	450.0	445.0	445.0
9	450	445.0	450.0	446.5	450.0	450.0	446.5	438.5	446.5	446.5	450.0	441.0	450.0
10	450	440.0	442.6	438.5	450.0	442.6	445.0	450.0	438.5	446.5	450.0	446.5	450.0
11	450	440.8	440.0	450.0	438.5	440.0	441.0	450.0	446.5	438.5	446.5	446.5	450.0
12	450	441.0	440.8	450.0	446.5	440.8	446.5	450.0	442.8	450.0	438.5	438.5	446.5
13	450	446.5	441.0	450.0	438.5	441.0	446.5	450.0	446.5	445.0	445.0	450.0	438.5
14	450	445.0	446.5	440.0	440.0	446.5	438.5	446.5	442.6	438.5	440.8	450.0	440.0
15	450	440.0	442.8	440.8	440.8	442.8	450.0	438.5	440.0	450.0	441.0	450.0	440.8
16	450	440.8	446.5	441.0	441.0	446.5	445.0	445.0	440.8	450.0	446.5	450.0	441.0
17	450	441.0	445.0	446.5	446.5	445.0	445.0	445.0	441.0	450.0	442.8	436.4	446.5
18	450	446.5	442.6	438.5	440.8	450.0	441.0	450.0	446.5	450.0	450.0	446.5	445.0
19	450	450.0	440.0	450.0	441.0	450.0	446.5	450.0	442.8	436.4	450.0	438.5	445.0
20	450	450.0	440.8	450.0	446.5	450.0	446.5	450.0	450.0	441.0	450.0	450.0	440.0
21	450	450.0	441.0	450.0	442.8	436.4	438.5	446.5	450.0	446.5	450.0	450.0	440.8
22	450	445.0	446.5	450.0	450.0	446.5	450.0	438.5	450.0	446.5	450.0	450.0	441.0
23	450	440.0	442.8	436.4	450.0	438.5	446.5	445.0	442.6	438.5	450.0	442.6	446.5
24	450	440.8	450.0	441.0	450.0	450.0	442.8	445.0	440.0	450.0	438.5	440.0	446.5
25	450	441.0	450.0	446.5	450.0	450.0	446.5	445.0	440.8	450.0	446.5	440.8	442.8
26	450	446.5	450.0	446.5	450.0	450.0	441.0	450.0	441.0	450.0	438.5	441.0	446.5
27	450	450.0	442.6	438.5	450.0	442.6	446.5	450.0	450.0	440.0	450.0	450.0	450.0
28	450	450.0	440.0	450.0	438.5	440.0	446.5	450.0	450.0	440.8	450.0	450.0	450.0
29	450	450.0	440.8	450.0	446.5	440.8	438.5	446.5	450.0	441.0	450.0	450.0	450.0
30	450	445.0	441.0	450.0	438.5	441.0	450.0	438.5	445.0	446.5	445.0	445.0	445.0





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**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.5**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**GROUP: Bt COTTONSEEDS (SAMPLE-II)**  
**(IN THE MONTH OF JUNE)**

Animal ID	25M	26M	27M	28M	29M	30M	31F	32F	33F	34F	35F	36F
1	441.0	446.5	450.0	446.5	446.5	450.0	440.0	446.5	440.8	440.0	450.0	438.5
2	446.5	438.5	446.5	442.6	446.5	450.0	440.8	442.8	441.0	440.8	450.0	446.5
3	442.8	450.0	438.5	440.0	438.5	450.0	441.0	446.5	446.5	441.0	450.0	438.5
4	446.5	445.0	445.0	440.8	450.0	438.5	440.0	446.5	445.0	446.5	440.0	440.0
5	445.0	445.0	445.0	441.0	440.0	446.5	440.8	442.8	440.0	442.8	440.8	440.8
6	450.0	441.0	450.0	446.5	440.8	442.8	441.0	446.5	440.8	446.5	441.0	441.0
7	450.0	446.5	450.0	442.8	441.0	446.5	442.8	442.8	441.0	445.0	446.5	446.5
8	450.0	446.5	450.0	450.0	440.0	446.5	446.5	450.0	440.0	446.5	446.5	450.0
9	436.4	438.5	446.5	450.0	440.8	442.8	446.5	450.0	440.8	442.8	446.5	450.0
10	446.5	450.0	438.5	450.0	441.0	446.5	438.5	450.0	441.0	446.5	438.5	450.0
11	438.5	446.5	445.0	442.6	440.0	446.5	450.0	438.5	440.0	446.5	450.0	438.5
12	450.0	442.8	445.0	440.0	440.8	442.8	450.0	442.8	440.8	442.8	450.0	450.0
13	450.0	446.5	445.0	440.8	441.0	446.5	450.0	442.8	441.0	446.5	450.0	450.0
14	450.0	441.0	450.0	441.0	442.8	442.8	442.8	441.0	446.5	450.0	446.5	442.8
15	440.8	440.0	450.0	438.5	441.0	441.0	441.0	446.5	438.5	446.5	442.6	442.8
16	441.0	440.8	450.0	446.5	446.5	450.0	445.0	442.8	450.0	438.5	440.0	450.0
17	446.5	441.0	450.0	438.5	446.5	450.0	445.0	446.5	445.0	445.0	440.8	450.0
18	445.0	446.5	440.0	440.0	438.5	450.0	441.0	445.0	445.0	445.0	441.0	442.8
19	440.0	442.8	440.8	440.8	450.0	438.5	441.0	450.0	441.0	450.0	446.5	442.8
20	440.8	446.5	441.0	441.0	442.8	446.5	445.0	450.0	446.5	450.0	442.8	450.0
21	441.0	445.0	446.5	446.5	441.0	450.0	441.0	450.0	446.5	450.0	450.0	450.0
22	446.5	450.0	440.8	440.0	450.0	438.5	450.0	436.4	438.5	446.5	450.0	445.0
23	446.5	450.0	441.0	440.8	450.0	446.5	450.0	446.5	450.0	438.5	450.0	441.0
24	438.5	450.0	446.5	441.0	450.0	438.5	442.8	438.5	446.5	445.0	442.6	445.0
25	450.0	438.5	445.0	446.5	440.0	440.0	446.5	450.0	442.8	445.0	440.0	450.0
26	440.0	446.5	440.0	442.8	440.8	440.8	446.5	450.0	446.5	445.0	440.8	450.0
27	440.8	442.8	440.8	446.5	441.0	441.0	441.0	450.0	441.0	450.0	441.0	450.0
28	441.0	446.5	441.0	445.0	446.5	446.5	446.5	450.0	446.5	450.0	446.5	446.5
29	442.8	441.0	445.0	446.5	441.0	445.0	446.5	450.0	446.5	450.0	446.5	441.0
30	445.0	446.5	446.5	450.0	445.0	446.5	445.0	441.0	450.0	445.0	450.0	445.0



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

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**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.5**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**GROUP : Bt COTTONSEEDS (SAMPLE-II)**  
**(IN THE MONTH OF JULY)**

Animal ID	25M	26M	27M	28M	29M	30M	31F	32F	33F	34F	35F	36F	
Days	Total feed Wt (gm) (Conce ntrate + sample II)( 400 +50)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	Feed consum ed (gms) (Conce ntrate+s ample II)	
1	450	450.0	450.0	450.0	445.5	450.0	450.0	450.0	450.0	445.5	450.0	445.5	450.0
2	450	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0
3	450	442.8	436.4	438.5	446.5	450.0	441.0	446.5	435.5	445.5	446.5	450.0	441.0
4	450	450.0	446.5	450.0	438.5	450.0	446.5	438.5	448.0	450.0	438.5	450.0	446.5
5	450	450.0	438.5	440.0	441.0	450.0	446.5	450.0	446.5	446.0	441.0	450.0	446.5
6	450	450.0	450.0	440.8	446.5	442.6	438.5	450.0	438.5	450.0	446.5	442.6	438.5
7	450	450.0	450.0	441.0	446.5	440.0	450.0	446.5	436.4	442.6	446.5	440.0	450.0
8	450	450.0	450.0	446.5	438.5	440.8	450.0	438.5	435.5	440.0	438.5	440.8	450.0
9	450	450.0	442.6	445.0	450.0	441.0	450.0	450.0	450.0	440.8	450.0	441.0	450.0
10	450	438.5	440.0	441.0	450.0	446.5	450.0	450.0	450.0	441.0	445.0	450.0	450.0
11	450	446.5	440.8	446.5	450.0	442.8	436.4	442.6	450.0	446.5	441.0	450.0	450.0
12	450	438.5	441.0	446.5	450.0	446.5	450.0	441.0	450.0	446.5	446.5	450.0	445.5
13	450	440.0	446.5	438.5	446.5	438.5	450.0	446.5	442.6	438.5	446.5	450.0	450.0
14	450	446.5	440.0	446.5	440.0	450.0	450.0	446.5	440.0	450.0	445.5	450.0	445.5
15	450	442.8	440.8	442.8	440.8	450.0	442.6	438.5	440.8	450.0	450.0	450.0	450.0
16	450	446.5	441.0	446.5	441.0	450.0	440.0	450.0	441.0	450.0	446.5	450.0	441.0
17	450	450.0	441.0	446.5	435.5	445.5	442.8	436.4	438.5	446.5	438.5	450.0	446.5
18	450	450.0	446.5	438.5	448.0	450.0	450.0	446.5	450.0	438.5	441.0	450.0	446.5
19	450	450.0	446.5	450.0	446.5	446.0	450.0	438.5	440.0	441.0	446.5	442.6	438.5
20	450	442.6	438.5	450.0	438.5	450.0	450.0	450.0	440.8	446.5	446.5	440.0	450.0
21	450	440.0	450.0	446.5	436.4	442.6	450.0	450.0	441.0	446.5	438.5	440.8	450.0
22	450	440.8	450.0	438.5	435.5	440.0	450.0	450.0	446.5	438.5	450.0	441.0	450.0
23	450	441.0	450.0	450.0	450.0	440.8	450.0	442.6	445.0	450.0	445.0	450.0	445.5
24	450	446.5	450.0	450.0	450.0	441.0	438.5	440.0	441.0	450.0	441.0	450.0	450.0
25	450	442.8	436.4	442.6	450.0	446.5	446.5	440.8	446.5	450.0	446.5	450.0	450.0
26	450	446.5	450.0	441.0	450.0	446.5	438.5	441.0	446.5	450.0	446.5	450.0	450.0
27	450	438.5	450.0	446.5	442.6	438.5	440.0	446.5	438.5	446.5	445.0	450.0	450.0
28	450	450.0	450.0	446.5	440.0	450.0	446.5	440.0	446.5	440.0	441.0	450.0	450.0
29	450	450.0	442.6	438.5	440.8	450.0	442.8	440.8	442.8	440.8	446.5	450.0	450.0
30	450	450.0	440.0	450.0	441.0	450.0	446.5	441.0	446.5	441.0	446.5	450.0	445.5
31	400	450.0	450.0	446.5	441.0	446.5	450.0	446.5	450.0	446.5	441.0	446.5	450.0

(Contd)



**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB-CHRONIC ( 90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**TABLE:4.5 (Contd)**  
**DAILY FEED CONSUMPTION DATA OF GOATS**  
**GROUP :Bt COTTONSEEDS (SAMPLE-II)**  
**(IN THE MONTH OF AUGUST)**

Animal ID	25M	26M	27M	28M	29M	30M	31F	32F	33F	34F	35F	36F	
Days	Total feed Wt (gm) (Conce ntrate+ sample II) (400 +50	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	Feed consu med (gms) (Conce ntrate+ sample II)	
1	450	438.5	440.8	450.0	450.0	446.0	446.5	438.5	440.8	450.0	450.0	446.0	450.0
2	450	450.0	441.0	450.0	450.0	450.0	438.5	450.0	441.0	450.0	450.0	450.0	450.0
3	450	450.0	446.5	450.0	450.0	442.6	441.0	450.0	446.5	450.0	450.0	442.6	450.0
4	450	450.0	442.8	436.4	436.4	440.0	446.5	450.0	442.8	436.4	436.4	440.0	440.0
5	450	450.0	450.0	446.5	450.0	450.0	446.5	450.0	450.0	446.5	446.5	445.0	446.0
6	450	436.4	450.0	438.5	450.0	450.0	438.5	436.4	450.0	438.5	438.5	450.0	446.0
7	450	445.5	445.0	445.5	450.0	450.0	445.5	445.0	445.0	445.5	441.0	450.0	450.0
8	450	450.0	450.0	450.0	440.8	436.4	436.4	450.0	450.0	450.0	446.5	450.0	442.6
9	450	450.0	450.0	450.0	441.0	435.5	435.5	450.0	450.0	450.0	446.5	436.4	440.0
10	450	436.4	442.6	450.0	446.5	436.0	436.0	436.4	442.6	450.0	438.5	445.5	445.5
11	450	450.0	441.0	450.0	446.5	436.0	436.0	450.0	441.0	450.0	438.5	440.8	450.0
12	450	450.0	446.5	442.6	438.5	445.5	450.0	450.0	446.5	442.6	450.0	441.0	450.0
13	450	450.0	446.5	440.0	450.0	450.0	450.0	450.0	446.5	440.0	450.0	446.5	450.0
14	450	442.6	438.5	440.8	450.0	446.0	450.0	442.6	438.5	440.8	450.0	442.8	436.4
15	450	440.0	450.0	441.0	450.0	450.0	450.0	440.0	450.0	441.0	450.0	450.0	446.5
16	450	440.8	450.0	446.5	450.0	442.6	450.0	440.8	450.0	446.5	436.4	450.0	438.5
17	450	441.0	450.0	442.8	436.4	440.0	442.6	441.0	450.0	442.8	450.0	446.0	450.0
18	450	446.5	450.0	450.0	446.5	450.0	442.6	446.5	450.0	450.0	450.0	450.0	450.0
19	450	442.8	436.4	450.0	438.5	450.0	450.0	438.5	450.0	450.0	450.0	442.6	450.0
20	450	450.0	441.0	450.0	450.0	441.0	450.0	450.0	441.0	450.0	436.4	440.0	440.0
21	450	450.0	446.5	450.0	450.0	446.5	450.0	450.0	446.5	450.0	445.5	445.5	446.0
22	450	438.5	440.8	450.0	450.0	446.0	438.5	440.8	450.0	446.5	438.5	440.8	450.0
23	450	450.0	441.0	450.0	450.0	450.0	450.0	441.0	450.0	438.5	450.0	441.0	450.0
24	450	450.0	446.5	450.0	450.0	442.6	450.0	446.5	450.0	441.0	450.0	446.5	450.0
25	450	450.0	442.8	436.4	436.4	440.0	450.0	442.8	436.4	446.5	450.0	442.8	436.4
26	450	450.0	450.0	446.5	450.0	446.0	450.0	450.0	446.5	446.5	450.0	450.0	446.5
27	450	436.4	450.0	438.5	450.0	450.0	436.4	450.0	438.5	438.5	436.4	450.0	438.5
28	450	450.0	450.0	450.0	450.0	442.6	450.0	450.0	450.0	450.0	450.0	450.0	450.0
29	450	450.0	450.0	450.0	436.4	440.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0
30	450	450.0	450.0	450.0	445.5	445.5	450.0	450.0	450.0	450.0	450.0	450.0	450.0



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB -CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**Confidential**

**TABLE - 5.1**  
**MEAN HAEMATOTOLOGY DATA OF MALE GOATS**

	W.B.C. (10 <sup>3</sup> )				DIFFERENTIAL LEUKOCYTES																			
					NEUTROPHIL (%)				LYMPHOCYTE (%)				BASOPHIL (%)				MONOCYTE (%)				EOSINOPHIL(%)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CON TRO L</b>	18.87 ± 3.40	14.42 ± 2.58	20.75 ± 2.66	21.70 ± 3.5	27.0 ± 2.45	24.33 ± 4.46	23.50 ± 6.22	25.33 ± 3.2	71.50 ± 3.27	73.50 ± 4.68	74.50 ± 6.22	72.67 ± 3.2	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.67 ± 0.52	1.17 ± 0.41	1.00 ± 0.0	1.0 ± 0.0	0.83 ± 0.41	1.0 ± 0.63	1.0 ± 0.0	1.0 ± 0.0
<b>S-I</b>	19.87 ± 4.28	12.55 ± 0.73	18.57 ± 3.39	23.31 ± 4.04	25.6 ± 2.16	21.0 ± 4.2	22.67 ± 5.35	25.66 ± 3.27	72.0 ± 2.61	77.0 ± 4.2	75.33 ± 5.35	72.33 ± 3.27	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	1.17 ± 0.41	1.00 ± 0.0	1.00 ± 0.0	1.0 ± 0.0	1.17 ± 0.41	1.0 ± 0.0	1.0 ± 0.0	1.0 ± 0.0
<b>S-II</b>	16.53 ± 3.98	17.12 ± 3.34	21.47 ± 3.24	24.15 ± 4.00	26.33 ± 1.37	22.33 ± 2.42	23.17 ± 5.15	28.33 ± 0.82	71.67 ± 1.37	75.67 ± 2.42	74.83 ± 5.15	69.67 ± 0.82	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	1.00 ± 0.0	1.00 ± 0.0	1.00 ± 0.0	1.0 ± 0.0	1.00 ± 0.0	1.0 ± 0.0	1.0 ± 0.0	1.0 ± 0.0

\* P = 0.05



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**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**Confidential**

TABLE-5.1 (Contd)

**MEAN HAEMATOLOGY DATA OF MALE GOATS**

	HCT				RED BLOOD CELL (10 <sup>6</sup> )				HAEMOGLOBIN (GM (%))				PLATELETS				PROTHROMBIN TIME (Sec.)				ESR			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
Contro I	26.9 ± 3.97	27.2 ± 1.87	21.12 ± 6.2	18.08 ± 2.35	2.37 ± 0.38	2.54 ± 0.38	2.67 ± 0.50	2.78 ± 0.38	9.13 ± 1.22	9.15 ± 0.8	7.47 ± 1.93	6.5 ± 0.83	31.4 ± 2.13	27.25 ± 1.16	29.23 ± 3.9	25.58 ± 1.53	9.50 ± 1.22	9.33 ± 0.82	9.50 ± 1.22	10 ± 1.41	0.02 ± 0.04	0.02 ± 0.04	0.00 ± 0.00	0.02 ± 0.04
S-I	28.93 ± 1.64	26.52 ± 3.44	25.03 ± 2.52	23.25 ± 1.67	2.55 ± 0.25	2.36 ± 0.45	2.34 ± 0.41	2.29 ± 0.57	10.03 ± 0.56	8.87 ± 1.08	8.55 ± 0.83	8.23 ± 0.55	32.13 ± 2.54	27.7 ± 2.41	30.32 ± 2.05	29.37 ± 1.80	9.67 ± 1.03	9.67 ± 1.21	9.5 ± 1.23	9.33 ± 1.21	0.05 ± 0.05	0.02 ± 0.04	0.03 ± 0.05	0.02 ± 0.04
S-II	29.53 ± 3.08	26.53 ± 3.94	25.05 ± 4.44	23.85 ± 2.99	2.40 ± 0.27	2.58 ± 0.18	2.48 ± 0.41	2.71 ± 0.19	10.13 ± 1.1	9.38 ± 1.06	8.73 ± 1.27	8.20 ± 0.84	32.03 ± 2.47	28.85 ± 4.45	29.93 ± 3.06	28.62 ± 2.73	9.33 ± 1.37	8.67 ± 1.21	9.00 ± 1.26	9.17 ± 1.21	0.02 ± 0.04	0.05 ± 0.08	0.03 ± 0.08	0.00 ± 0.00



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**TABLE - 5.2  
 MEAN HAEMATOLOGY DATA OF FEMALE GOATS**

	W.B.C. (10 <sup>3</sup> )				DIFFERENTIAL LEUKOCYTES																			
					NEUTROPHIL (%)				LYMPHOCYTE (%)				BASOPHIL (%)				MONOCYTE (%)				EOSINOPHIL(%)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CONTROL</b>	16.1 ± 4.24	12.97 ± 2.88	16.78 ± 2.83	23.45 ± 2.84	27.3 ± 4.93	21.83 ± 4.31	27.00 ± 4.00	25 ± 3.46	70.33 ± 5.65	76.17 ± 4.31	71 ± 4.0	73 ± 3.46	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	1.17 ± 0.41	1.00 ± 0.0	1.00 ± 0.0	1.0 ± 0.0	1.17 ± 0.41	1.0 ± 0.0	1.0 ± 0.0	1.30 ± 0.0
<b>S-I</b>	20.28 ± 4.65	13.02 ± 2.64	19.28 ± 4.05	22.43 ± 4.80	28.5 ± 0.54	21.67 ± 3.78	20.0 ± 3.37	27.33 ± 3.72	68.83 ± 0.75	76.33 ± 3.78	78.00 ± 2.37	70.67 ± 3.72	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	1.33 ± 0.52	1.00 ± 0.0	1.00 ± 0.0	1.0 ± 0.0	1.33 ± 0.52	1.0 ± 0.0	1.0 ± 0.0	1.0 ± 0.0
<b>S-II</b>	16.63 ± 3.4	17.10 ± 4.21	15.65 ± 4.19	21.57 ± 5.4	27.67 ± 2.73	21.00 ± 4.29	24.5 ± 4.51	24.5 ± 5.86	69.5 ± 3.08	77.0 ± 4.29	73.17 ± 5.12	73.5 ± 5.85	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	0.0 ± 0.0	1.33 ± 0.52	1.0 ± 0.0	1.17 ± 0.4	1.0 ± 0.11	1.50 ± 0.55	1.0 ± 0.0	1.0 ± 0.0	1.0 ± 0.0

\* P = 0.05

(Contd)



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**TABLE-5.2 (Contd)**  
**MEAN HAEMATOLOGY DATA OF FEMALE GOATS**

Days	HCT				RED BLOOD CELL (10 <sup>6</sup> )				HAEMOGLOBIN (GM) (%)				PLATELETS				PROTHROMBIN TIME (Sec.)				ESR			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>ONTROL</b>	32.67 ± 2.93	24.8 ± 3.64	25.88 ± 3.97	21.78 ± 2.43	2.37 ± 0.38	2.54 ± 0.38	2.67 ± 0.50	2.78 ± 0.38	11.05 ± 0.71	8.70 ± 1.05	8.98 ± 1.28	7.7 ± 0.92	32.07 ± 1.98	28.77 ± 0.77	31.17 ± 2.57	30.6 1 ± 2.82	9.33 ± 1.03	9.33 ± 1.21	8.67 ± 0.82	9.5 ± 1.05	0.05 ± 0.08	0.02 ± 0.04	0.07 ± 0.08	0.02 ± 0.04
<b>Sample I</b>	30.02 ± 2.91	25.08 ± 4.85	24.37 ± 1.91	22.0 ± 2.22	2.55 ± 0.25	2.36 ± 0.45	2.34 ± 0.41	2.29 ± 0.57	10.28 ± 0.97	8.42 ± 1.63	8.50 ± 1.37	7.65 ± 0.65	30.90 ± 1.91	26.64 ± 2.66	29.5 ± 2.65	26.7 2 ± 1.60	9.50 ± 1.05	9.17 ± 1.17	9.0 ± 0.89	9.50 ± 1.08	0.05 ± 0.08	0.03 ± 0.05	0.03 ± 0.05	0.03 ± 0.08
<b>Sample II</b>	30.58 ± 3.98	29.37 ± 3.16	24.37 ± 1.91	20.27 ± 3.65	2.40 ± 0.27	2.58 ± 0.18	2.48 ± 0.41	2.71 ± 0.19	9.92 ± 1.91	9.90 ± 0.86	8.37 ± 0.72	6.98 ± 1.42	31.73 ± 2.55	31.28 ± 1.23	29.42 ± 1.71	27.7 5 ± 1.66	9.17 ± 1.17	9.00 ± 0.89	9.67 ± 1.21	9.5 ± 1.05	0.03 ± 0.05	0.02 ± 0.04	0.03 ± 0.08	0.02 ± 0.04



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB -CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**Confidential**

**TABLE-5.3  
CONTROL GROUP  
HAEMATOLOGICAL ANALYSIS ON DIFFERENT DAYS**

Days	W.B.C. (10 <sup>3</sup> )				DIFFERENTIAL LEUKOCYTES																							
	Day 0	Day 30	Day 60	Day 90	NEUTROPHIL (%)				LYMPHOCYTE (%)				BASOPHIL (%)				MONOCYTE (%)				EOSINOPHIL(%)							
<b>Male</b>																												
<b>1</b>	18.4	15.7	24.1	18.0	28	29.0	28	28	70.0	69.0	70	70	00	00	00	00	01	01	01	01	01	01	01	01	01	01	01	01
<b>2</b>	21.6	12.7	18.9	20.5	29	29.0	20	29	69.0	68.0	78	69	00	00	00	00	01	01	01	01	01	02	01	01	01	02	01	01
<b>3</b>	14.7	13.9	21.2	18.3	29	23.0	23	20	69.0	75.0	75	78	00	00	00	00	01	02	01	01	01	00	01	01	01	00	01	01
<b>4</b>	23.9	10.6	22.5	26.02	23	21.0	13	24	77.0	77.0	85	74	00	00	00	00	00	01	01	01	00	01	01	01	01	01	01	01
<b>5</b>	16.2	17.9	16.6	21.7	28	18.0	28	26	70.0	80.0	70	72	00	00	00	00	01	01	01	01	01	01	01	01	01	01	02	01
<b>6</b>	18.4	15.7	21.2	25.7	25	26.0	29	25	74.0	72.0	69	73	0.0	00	00	00	00	01	01	01	01	01	01	01	01	01	01	01
<b>Mean</b>	<b>18.87</b>	<b>14.42</b>	<b>20.75</b>	<b>21.70</b>	<b>27.0</b>	<b>24.33</b>	<b>23.50</b>	<b>25.33</b>	<b>71.50</b>	<b>73.50</b>	<b>74.50</b>	<b>72.67</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.67</b>	<b>1.17</b>	<b>1.00</b>	<b>1.0</b>	<b>0.83</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>
<b>SD</b>	<b>3.40</b>	<b>2.58</b>	<b>2.66</b>	<b>3.50</b>	<b>2.45</b>	<b>4.46</b>	<b>6.22</b>	<b>3.20</b>	<b>3.27</b>	<b>4.68</b>	<b>6.22</b>	<b>3.20</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.52</b>	<b>0.41</b>	<b>0.0</b>	<b>0.0</b>	<b>0.41</b>	<b>0.63</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Female</b>																												
<b>7</b>	13.3	10.8	18.1	19.8	27.0	19.0	28	27	71.0	79.0	70	71	00	00	00	00	01	01	01	01	01	01	01	01	01	01	01	01
<b>8</b>	20.5	15.8	12.4	22.2	21.0	29.0	30	28	77.0	69.0	68	70	00	00	00	00	01	01	01	01	01	01	01	01	01	01	01	01
<b>9</b>	21.0	17.4	19.9	27.5	25.0	21.0	28	24	73.0	77.0	70	74	00	00	00	00	01	01	01	01	01	01	01	01	01	01	01	01
<b>10</b>	10.4	11.3	17.3	23.6	28.0	18.0	20	24	70.0	80.0	78	74	00	00	00	00	01	01	01	01	01	01	01	01	01	01	01	01
<b>11</b>	17.4	11.7	18.6	21.7	27.0	25.0	25	19	71.0	73.0	73	79	00	00	00	00	01	01	01	01	01	01	01	01	01	01	01	01
<b>12</b>	14.0	10.8	14.4	25.9	36.0	19.0	31	28	60.0	79.0	67	70	00	00	00	00	02	01	01	01	02	01	01	01	01	01	01	01
<b>Mean</b>	<b>16.1</b>	<b>12.97</b>	<b>16.78</b>	<b>23.45</b>	<b>27.3</b>	<b>21.83</b>	<b>27.00</b>	<b>25</b>	<b>70.33</b>	<b>76.17</b>	<b>71</b>	<b>73</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.17</b>	<b>1.00</b>	<b>1.00</b>	<b>1.0</b>	<b>1.17</b>	<b>1.0</b>	<b>1.0</b>	<b>1.30</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.30</b>
<b>SD</b>	<b>4.24</b>	<b>2.88</b>	<b>2.83</b>	<b>2.84</b>	<b>4.93</b>	<b>4.31</b>	<b>4.00</b>	<b>3.46</b>	<b>5.65</b>	<b>4.31</b>	<b>4.00</b>	<b>3.46</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.41</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.41</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

(Contd)





**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB -CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**Confidential**

**TABLE-5.3 (Contd)**  
**CONTROL GROUP**  
**HAEMATOLOGICAL ANALYSIS ON DIFFERENT DAYS**

Day	HCT				RED BLOOD CELL (10 <sup>6</sup> )				HAEMOGLOBIN (GM (%))				PLATELETS				PROTHROMBIN TIME (Sec.)				ESR				
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	
<b>Male</b>																									
1	24.6	27.9	24.3	22.2	2.10	2.24	2.89	3.20	8.2	9.4	8.5	7.4	33.6	26.2	32.8	29.8	08	09	8	12	00	00	00	00	
2	33.0	30.3	24.8	18.0	1.98	2.50	2.83	3.10	11.0	10.0	8.6	6.2	33.4	28.8	31.0	26.7	10	10	09	10	00	00	00	00	
3	24.4	27.0	10.2	15.0	2.39	2.85	3.30	2.68	8.8	9.9	3.9	5.0	32.0	26.5	22.2	27.0	08	10	11	09	00	00	00	0.1	
4	24.3	24.9	21.4	17.0	2.87	1.98	2.84	2.15	8.1	8.0	7.8	6.9	30.0	27.5	31.9	30.6	10	08	09	08	00	00	00	00	
5	30.9	25.8	27.6	18.3	2.12	2.65	1.95	2.89	10.3	8.4	9.2	6.9	31.4	26.1	30.0	28.6	10	09	09	11	00	0.1	00	00	
6	24.2	27.3	18.4	17.9	2.78	3.0	2.19	2.65	8.4	9.2	6.8	6.6	28.0	28.4	27.5	28.8	11	10	11	10	0.1	00	00	00	
<b>Mean</b>	<b>26.9</b>	<b>27.2</b>	<b>21.12</b>	<b>18.08</b>	<b>2.37</b>	<b>2.54</b>	<b>2.67</b>	<b>2.78</b>	<b>9.13</b>	<b>9.15</b>	<b>7.47</b>	<b>6.5</b>	<b>31.4</b>	<b>27.25</b>	<b>29.23</b>	<b>25.58</b>	<b>9.50</b>	<b>9.33</b>	<b>9.50</b>	<b>10</b>	<b>0.02</b>	<b>0.02</b>	<b>0.00</b>	<b>0.02</b>	
<b>SD</b>	<b>3.97</b>	<b>1.87</b>	<b>6.20</b>	<b>2.35</b>	<b>0.38</b>	<b>0.38</b>	<b>0.50</b>	<b>0.38</b>	<b>1.22</b>	<b>0.80</b>	<b>1.93</b>	<b>0.83</b>	<b>2.13</b>	<b>1.16</b>	<b>3.90</b>	<b>1.53</b>	<b>1.22</b>	<b>0.82</b>	<b>1.22</b>	<b>1.41</b>	<b>0.04</b>	<b>0.04</b>	<b>0.00</b>	<b>0.04</b>	
<b>Female</b>																									
7	30.2	24.3	24.0	24.3	2.68	2.49	2.15	2.96	10.4	8.5	8.0	8.1	32.0	27.9	31.2	32.0	09	08	08	09	00	00	0.1	00	
8	30.2	29.8	7.6	24.8	2.18	2.64	1.96	2.76	10.4	10.0	9.2	8.6	31.9	29.6	33.2	32.4	08	10	09	08	00	00	00	00	
9	30.3	24.2	21.7	21.0	2.65	2.74	1.95	2.60	10.5	8.6	7.9	7.0	29.0	27.9	26.8	25.6	11	10	09	11	00	0.1	00	00	
10	37.3	18.9	33.0	24.1	2.19	2.75	2.28	1.97	12.0	6.9	11.4	8.7	34.0	29.2	34.0	30.2	09	11	08	10	0.1	00	00	00	
11	33.9	24.4	24.8	18.2	2.16	2.65	2.87	1.85	11.3	8.8	8.6	6.4	34.4	28.5	30.0	33.6	09	09	08	09	00	00	0.2	0.1	
12	34.1	27.2	24.2	21.3	1.75	1.82	1.57	1.63	11.7	9.4	8.8	7.4	31.1	29.5	31.8	29.9	10	08	10	10	0.2	00	0.1	00	
<b>Mean</b>	<b>32.67</b>	<b>24.8</b>	<b>25.88</b>	<b>21.78</b>	<b>2.27</b>	<b>2.52</b>	<b>2.13</b>	<b>2.30</b>	<b>11.05</b>	<b>8.70</b>	<b>8.98</b>	<b>7.7</b>	<b>32.07</b>	<b>28.77</b>	<b>31.17</b>	<b>30.61</b>	<b>9.33</b>	<b>9.33</b>	<b>8.67</b>	<b>9.5</b>	<b>0.05</b>	<b>0.02</b>	<b>0.07</b>	<b>0.02</b>	
<b>SD</b>	<b>2.93</b>	<b>3.64</b>	<b>3.97</b>	<b>2.43</b>	<b>0.35</b>	<b>0.35</b>	<b>0.43</b>	<b>0.35</b>	<b>0.71</b>	<b>1.05</b>	<b>1.28</b>	<b>0.92</b>	<b>1.98</b>	<b>0.77</b>	<b>2.57</b>	<b>2.82</b>	<b>1.03</b>	<b>1.21</b>	<b>0.82</b>	<b>1.05</b>	<b>0.08</b>	<b>0.04</b>	<b>0.08</b>	<b>0.04</b>	



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

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**DATE : 29.09.2007**

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**TABLE-5.4**  
**NON-Bt COTTONSEEDS (SAMPLE-I)**  
**HAEMATOLOGICAL ANALYSIS ON DIFFERENT DAYS**

Days	W.B.C. (10 <sup>3</sup> )				DIFFERENTIAL LEUKOCYTES																			
					NEUTROPHIL (%)				LYMPHOCYTE (%)				BASOPHIL (%)				MONOCYTE (%)				EOSINOPHIL(%)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>Male</b>																								
<b>13</b>	23.0	11.7	20.0	20.6	24.0	20.0	29	28	74.0	78.0	69	70	00	00	00	00	01	01	01	01	01	01	01	01
<b>14</b>	17.3	12.7	17.7	29.7	29.0	24.0	18	24	68.0	74.0	80	74	00	00	00	00	02	01	01	01	01	01	01	01
<b>15</b>	20.0	12.7	20.0	25.8	26.0	18.0	27	26	72.0	80.0	71	72	00	00	00	00	01	01	01	01	01	01	01	01
<b>16</b>	22.5	13.7	14.4	20.7	27.0	28.0	26	29	70.0	70.0	72	69	00	00	00	00	01	01	01	01	02	01	01	01
<b>17</b>	12.6	11.8	15.6	24.2	25.0	19.0	16	20	73.0	79.0	82	78	00	00	00	00	01	01	01	01	01	01	01	01
<b>18</b>	23.8	12.7	23.7	18.9	23.0	17.0	20	27	75.0	81.0	78	71	00	00	00	00	01	01	01	01	01	01	01	01
<b>Mean</b>	<b>19.87</b>	<b>12.55</b>	<b>18.57</b>	<b>23.31</b>	<b>25.6</b>	<b>21.0</b>	<b>22.67</b>	<b>25.66</b>	<b>72.0</b>	<b>77.0</b>	<b>75.33</b>	<b>72.33</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.17</b>	<b>1.00</b>	<b>1.0</b>	<b>1.0</b>	<b>1.17</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>
<b>SD</b>	<b>4.28</b>	<b>0.73</b>	<b>3.39</b>	<b>4.04</b>	<b>2.16</b>	<b>4.20</b>	<b>5.35</b>	<b>3.27</b>	<b>2.61</b>	<b>4.20</b>	<b>5.35</b>	<b>3.27</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.41</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.41</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Female</b>																								
<b>19</b>	20.5	14.4	23.2	28.7	28.0	19.0	17	25	69.0	79.0	81	73	00	00	00	00	02	01	01	01	01	01	01	01
<b>20</b>	17.4	12.7	24.5	24.4	29.0	21.0	23	30	68.0	77.0	75	68	00	00	00	00	01	01	01	01	02	01	01	01
<b>21</b>	24.9	17.2	14.4	19.0	28.0	22.0	22	28	70.0	76.0	76	70	00	00	00	00	01	01	01	01	01	01	01	01
<b>22</b>	24.7	10.8	16.5	26.7	29.0	23.0	21	29	69.0	75.0	77	69	00	00	00	00	01	01	01	01	01	01	01	01
<b>23</b>	12.7	9.8	16.7	17.2	29.0	28.0	18	21	68.0	70.0	80	77	00	00	00	00	01	01	01	01	02	01	01	01
<b>24</b>	21.5	13.2	20.4	18.6	28.0	17.0	19	31	69.0	81.0	79	67	00	00	00	00	02	01	01	01	01	01	01	01
<b>Mean</b>	<b>20.28</b>	<b>13.02</b>	<b>19.28</b>	<b>22.43</b>	<b>28.5</b>	<b>21.67</b>	<b>20.0</b>	<b>27.33</b>	<b>68.83</b>	<b>76.33</b>	<b>78.00</b>	<b>70.67</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.33</b>	<b>1.00</b>	<b>1.0</b>	<b>1.0</b>	<b>1.33</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>
<b>SD</b>	<b>4.65</b>	<b>2.64</b>	<b>4.05</b>	<b>4.80</b>	<b>0.55</b>	<b>3.78</b>	<b>2.37</b>	<b>3.72</b>	<b>0.75</b>	<b>3.78</b>	<b>2.37</b>	<b>3.72</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.52</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.52</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

(Contd)



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

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**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB -CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
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**TABLE-5.4 (Contd)**  
**NON-Bt COTTONSEEDS (SAMPLE-I)**  
**HAEMATOLOGICAL ANALYSIS ON DIFFERENT DAYS**

Days	HCT				RED BLOOD CELL (10 <sup>6</sup> )				HAEMOGLOBIN (GM) (%)				PLATELETS				PROTHROMBIN TIME (Sec.)				ESR				
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	
<b>Male</b>																									
<b>13</b>	27.5	1.9	24.6	24.4	2.68	2.96	2.46	1.97	9.5	7.3	8.2	8.8	30.9	28.2	31.9	31.9	10	09	10	08	0.1	00	00	00	
<b>14</b>	30.5	27.9	21.2	21.3	2.13	1.94	2.52	2.58	10.5	9.3	7.4	7.4	32.9	29.8	26.6	29.9	09	11	11	10	0.1	00	00	00	
<b>15</b>	27.1	24.6	24.3	20.9	2.59	2.18	2.87	2.45	9.7	8.2	8.0	7.9	33.9	23.3	30.0	29.1	08	08	10	11	00	00	0.1	0.1	
<b>16</b>	30.0	30.0	24.4	24.4	2.86	2.18	1.75	1.31	10.0	10.0	8.8	8.8	35.0	27.1	30.8	30.4	10	10	08	08	00	0.1	0.1	00	
<b>17</b>	27.8	30.4	27.8	24.3	2.39	2.87	2.49	2.96	9.6	10.0	9.6	8.1	32.3	28.1	32.4	28.2	10	09	08	10	0.1	00	00	00	
<b>18</b>	30.7	24.3	27.9	24.2	2.64	2.0	1.95	2.46	10.9	8.4	9.3	8.4	27.8	29.8	30.2	26.7	11	11	10	09	00	00	00	00	
<b>Mean</b>	<b>28.93</b>	<b>26.52</b>	<b>25.03</b>	<b>23.25</b>	<b>2.55</b>	<b>2.36</b>	<b>2.34</b>	<b>2.29</b>	<b>10.03</b>	<b>8.87</b>	<b>8.55</b>	<b>8.23</b>	<b>32.13</b>	<b>27.7</b>	<b>30.32</b>	<b>29.37</b>	<b>9.67</b>	<b>9.67</b>	<b>9.5</b>	<b>9.33</b>	<b>0.05</b>	<b>0.02</b>	<b>0.03</b>	<b>0.02</b>	
<b>SD</b>	<b>1.64</b>	<b>3.44</b>	<b>2.52</b>	<b>1.67</b>	<b>0.25</b>	<b>0.45</b>	<b>0.41</b>	<b>0.57</b>	<b>0.56</b>	<b>1.08</b>	<b>0.83</b>	<b>0.55</b>	<b>2.54</b>	<b>2.41</b>	<b>2.05</b>	<b>1.80</b>	<b>1.03</b>	<b>1.21</b>	<b>1.23</b>	<b>1.21</b>	<b>0.05</b>	<b>0.04</b>	<b>0.05</b>	<b>0.04</b>	
<b>Female</b>																									
<b>19</b>	27.1	24.2	24.8	21.8	2.98	3.13	3.15	3.0	9.7	8.4	9.0	7.6	29.0	23.0	30.0	26.7	11	08	10	11	00	00	00	00	
<b>20</b>	27.8	24.9	24.3	18.7	1.94	2.46	2.16	2.67	9.6	8.3	8.9	6.9	29.3	27.4	30.6	25.0	10	09	08	10	0.2	0.1	00	00	
<b>21</b>	33.2	30.6	27.2	24.4	2.12	2.36	2.65	2.45	11.4	10.2	9.2	8.6	33.4	23.9	31.9	29.2	08	08	09	09	00	00	0.1	00	
<b>22</b>	30.9	18.3	21.2	21.0	1.96	2.18	2.42	3.16	10.3	6.0	8.5	7.1	31.4	28.7	30.2	26.8	09	11	08	10	00	0.1	0.1	00	
<b>23</b>	27.6	21.9	24.5	21.5	1.94	2.13	2.49	2.62	9.2	7.4	5.8	7.5	29.5	29.7	24.3	25.0	10	10	10	09	00	00	00	0.2	
<b>24</b>	33.5	30.6	24.2	24.6	3.0	2.95	2.12	2.95	11.5	10.2	9.6	8.2	32.8	27.4	30.0	27.6	09	09	09	08	0.1	00	00	00	
<b>Mean</b>	<b>30.02</b>	<b>25.08</b>	<b>24.37</b>	<b>22.0</b>	<b>2.55</b>	<b>2.54</b>	<b>2.50</b>	<b>2.81</b>	<b>10.28</b>	<b>8.42</b>	<b>8.50</b>	<b>7.65</b>	<b>30.90</b>	<b>26.64</b>	<b>29.5</b>	<b>26.72</b>	<b>9.50</b>	<b>9.17</b>	<b>9</b>	<b>9.5</b>	<b>0.05</b>	<b>0.03</b>	<b>0.03</b>	<b>0.03</b>	
<b>SD</b>	<b>2.91</b>	<b>4.85</b>	<b>1.91</b>	<b>2.22</b>	<b>0.25</b>	<b>0.41</b>	<b>0.38</b>	<b>0.27</b>	<b>0.97</b>	<b>1.63</b>	<b>1.37</b>	<b>0.65</b>	<b>1.91</b>	<b>2.66</b>	<b>2.65</b>	<b>1.60</b>	<b>1.05</b>	<b>1.17</b>	<b>0.89</b>	<b>1.08</b>	<b>0.08</b>	<b>0.05</b>	<b>0.05</b>	<b>0.08</b>	



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

**PROJECT NO. : TOX-346GOAT**  
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**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**Confidential**

**TABLE-5.5**  
**Bt COTTONSEEDS (SAMPLE -II)**  
**HAEMATOLOGICAL ANALYSIS ON DIFFERENT DAYS**

Days	W.B.C. (10 <sup>3</sup> )				DIFFERENTIAL LUKOCYTES																				
					NEUTROPHIL (%)				LYMPHOCYTE (%)				BASOPHIL (%)				MONOCYTE (%)				EOSINOPHIL(%)				
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	
<b>Male</b>																									
<b>25</b>	16.9	14.4	21.7	23.8	28.0	19	29	29	70.0	79.0	69	69	00	00	00	00	01	01	01	01	01	01	01	01	
<b>26</b>	24.0	20.8	25.2	22.5	26.0	22	19	27	72.0	76.0	79	71	00	00	00	00	01	01	01	01	01	01	01	01	
<b>27</b>	15.7	16.4	25.4	29.5	25.0	24	18	28	73.0	74.0	80	70	00	00	00	00	01	01	01	01	01	01	01	01	
<b>28</b>	16.2	12.4	18.5	24.3	26.0	24	25	29	72.0	74.0	73	69	00	00	00	00	01	01	01	01	01	01	01	01	
<b>29</b>	13.5	20.4	20.0	17.8	28.0	25	29	28	70.0	73.0	69	70	00	00	00	00	01	01	01	01	01	01	01	01	
<b>30</b>	12.9	18.3	18.0	27.0	25.0	20	19	29	73.0	78.0	79	69	00	00	00	00	01	01	01	01	01	01	01	01	
<b>Mean</b>	<b>16.53</b>	<b>17.12</b>	<b>21.47</b>	<b>24.15</b>	<b>26.33</b>	<b>22.33</b>	<b>23.17</b>	<b>28.33</b>	<b>71.67</b>	<b>75.67</b>	<b>74.83</b>	<b>69.67</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>	
<b>SD</b>	<b>3.98</b>	<b>3.34</b>	<b>3.24</b>	<b>4.00</b>	<b>1.37</b>	<b>2.42</b>	<b>5.15</b>	<b>0.82</b>	<b>1.37</b>	<b>2.42</b>	<b>5.15</b>	<b>0.82</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
<b>Female</b>																									
<b>31</b>	15.7	10.2	12.8	27.2	28.0	24	28	27	70.0	74.0	70	71	00	00	00	00	01	01	01	01	01	01	01	01	
<b>32</b>	11.4	14.0	9.2	25.7	30.0	28	24	33	68.0	70.0	74	65	00	00	00	00	01	01	01	01	01	01	01	01	
<b>33</b>	16.4	19.4	16.2	15.2	26.0	18	31	21	72.0	80.0	65	77	00	00	00	00	01	01	02	01	01	01	02	01	
<b>34</b>	22.0	21.7	20.0	19.4	29.0	17	23	17	67.0	81.0	75	81	00	00	00	00	02	01	01	01	01	01	01	01	
<b>35</b>	17.4	18.5	20.0	26.0	23.0	18	18	28	74.0	80.0	80	70	00	00	00	00	01	01	01	01	02	01	01	01	
<b>36</b>	16.9	18.8	15.7	15.9	30.0	21	23	21	66.0	77.0	75	77	00	00	00	00	02	01	01	01	0.2	01	01	01	
<b>Mean</b>	<b>16.63</b>	<b>17.10</b>	<b>15.65</b>	<b>21.57</b>	<b>27.67</b>	<b>21.00</b>	<b>24.5</b>	<b>24.5</b>	<b>69.5</b>	<b>77.0</b>	<b>73.17</b>	<b>73.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.33</b>	<b>1.0</b>	<b>1.17</b>	<b>1.0</b>	<b>1.50</b>	<b>1.00</b>	<b>1.0</b>	<b>1.00</b>	
<b>SD</b>	<b>3.40</b>	<b>4.21</b>	<b>4.19</b>	<b>5.40</b>	<b>2.73</b>	<b>4.29</b>	<b>4.51</b>	<b>5.86</b>	<b>3.08</b>	<b>4.29</b>	<b>5.12</b>	<b>5.85</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.52</b>	<b>0.0</b>	<b>0.40</b>	<b>0.00</b>	<b>0.55</b>	<b>0.00</b>	<b>0.0</b>	<b>0.00</b>	

(Contd)



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**TABLE-5.5 (Contd)**  
**Bt COTTONSEEDS (SAMPLE – II)**  
**HAEMATOLOGICAL ANALYSIS ON DIFFERENT DAYS**

Days	HCT				RED BLOOD CELL (10 <sup>6</sup> )				HAEMOGLOBIN (GM) (%)				PLATELETS				PROTHROMBIN (Sec.)				ESR				
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	
Male																									
25	27.3	21.7	18.7	18.4	2.19	2.68	2.49	2.67	9.5	7.9	6.9	6.8	31.6	23.1	24.3	24.8	11	08	11	11	00	00	00	00	
26	27.3	24.7	27.6	24.7	2.16	2.78	3.12	3.01	9.1	8.9	9.2	8.9	28.3	30.3	32.0	29.7	11	09	08	10	0.1	00	00	00	
27	33.7	27.1	21.4	27.6	2.19	2.78	2.73	2.78	11.9	9.7	7.8	9.2	30.5	30.9	28.7	30.0	08	08	08	08	00	0.2	00	00	
28	27.8	24.7	24.3	23.9	2.37	2.46	1.97	2.59	9.6	8.9	8.4	8.0	32.5	23.4	32.1	32.6	08	11	10	08	00	00	0.2	00	
29	27.8	33.3	30.6	24.3	2.75	2.37	2.16	2.72	9.6	11.0	10.2	8.0	34.4	32.4	32.0	27.6	09	08	09	09	00	00	00	00	
30	33.3	27.7	27.7	24.2	2.71	2.43	2.42	2.46	11.1	9.9	9.9	8.3	34.9	33.0	30.5	27.0	09	08	08	09	00	0.1	00	00	
Mean	29.53	26.53	25.05	23.85	2.40	2.58	2.48	2.71	10.13	9.38	8.73	8.20	32.03	28.85	29.93	28.62	9.33	8.67	9.00	9.17	0.02	0.05	0.03	0.00	
SD	3.08	3.94	4.44	2.99	0.27	0.18	0.41	0.19	1.10	1.06	1.27	0.84	2.47	4.45	3.06	2.73	1.37	1.21	1.26	1.67	0.04	0.08	0.08	0.00	
Female																									
31	28.6	27.0	24.8	21.9	2.19	2.80	2.70	2.46	7.2	9.0	8.6	7.3	29.2	30.4	30.4	28.5	11	09	09	10	00	00	00	00	
32	24.8	33.3	24.3	15.9	2.42	3.11	3.16	2.19	8.6	11.1	8.1	5.3	30.4	31.9	32.4	26.3	08	08	08	10	00	00	00	0.1	
33	35.3	30.3	27.2	23.8	2.75	2.17	2.46	2.38	12.1	10.1	9.4	8.3	34.4	32.8	28.1	27.8	08	10	11	09	0.1	00	00	00	
00	28.3	24.4	21.2	24.0	2.57	2.62	2.15	1.94	9.1	8.8	7.2	8.0	28.8	30.0	28.8	30.6	09	09	09	09	0.1	00	00	00	
00	33.0	30.9	24.5	16.0	2.22	2.67	2.19	2.56	11.0	10.3	8.5	5.1	34.0	30.4	27.9	26.1	10	08	11	11	00	0.1	0.2	00	
36	33.5	30.3	24.2	20.0	2.64	2.79	3.0	3.10	11.5	10.1	8.4	7.9	33.6	30.2	28.9	27.2	09	10	10	08	00	00	00	00	
Mean	30.58	29.37	24.37	20.27	2.47	2.71	2.61	2.44	9.92	9.90	8.37	6.98	31.73	31.28	29.42	27.75	9.17	9.00	9.67	9.5	0.03	0.02	0.03	0.02	
SD	3.98	3.16	1.91	3.65	0.23	0.34	0.42	0.39	1.91	0.86	0.72	1.42	2.55	1.23	1.71	1.66	1.17	0.89	1.21	1.05	0.05	0.04	0.08	0.04	



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**TABLE - 6.1**  
**MEAN BIOCHEMISTRY DATA ON MALE GOATS**

	ALB (g/dl)				CHO (mg/dl)				GLU (mg/dl)				TG (mg/dl)				GOT (U/l)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CONTROL</b>	3.38 ± 0.17	3.25 ± 0.26	3.07 ± 0.64	2.9 ± 0.46	72.83 ± 12.06	68.00 ± 8.94	77.5 ± 30.41	58.83 ± 22.83	34.67 ± 10.97	32.00 ± 6.69	31.83 ± 7.08	25.5 ± 22.83	14.17 ± 4.17	22.17 ± 12.09	40.33 ± 20.94	28.67 ± 13.84	87.38 ± 9.33	75.77 ± 19.53	96.15 ± 19.09	111.45 ± 21.94
<b>S- I</b>	3.55 ± 0.10	3.02 ± 0.39	3.45 ± 0.51	3.47 ± 0.39	71.83 ± 18.78	71.33 ± 60.72	84.17 ± 22.68	64.33 ± 3.61	35.83 ± 7.25	37.83 ± 9.70	43.33 ± 29.57	27.33 ± 5.85	14.50 ± 2.88	14.17 ± 2.79	55.5 ± 55.26	51.50 ± 39.49	82.30 ± 13.74	89.75 ± 19.61	131.5 ± 49.12	131.8 ± 47.79
<b>S- II</b>	3.30 ± 0.49	3.38 ± 0.44	3.13 ± 0.27	3.15 ± 0.32	85.83 ± 16.08	105 ± 30.26	99.83 ± 27.66	86.83 ± 21.08	44.33 ± 24.11	41.67 ± 7.92	26.17 ± 8.16	20.17 ± 5.42	11.00 ± 2.53	19.83 ± 4.88	44.33 ± 18.97	33.83 ± 17.12	82.3 ± 10.85	148.3 ± 33.12	121.4 ± 22.79	100.5 ± 15.05

\* P = 0.05

(Contd)



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**TABLE-6.1 (Contd)**  
**MEAN BIOCHEMISTRY DATA ON MALE GOATS**

	GPT (U/L)				GGT (U/L)				Phos (mM/L)				Urea (mg/dl )				Nitrogen			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CONT ROL</b>	22.98	17.83	20.7	23.72	64.85	62.47	81.20	70.57	6.10	6.70	6.78	8.65	21.52	26.07	19.18	9.85	1.09	1.35	1.45	1.24
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	4.58	3.45	8.51	7.36	9.77	17.42	15.58	10.81	2.38	1.22	2.51	1.15	9.52	5.72	9.88	5.67	0.08	0.13	0.21	0.20
<b>S- I</b>	25.62	23.13	20.37	27.25	57.98	48.05	92.05	93.55	6.35	7.87	7.03	8.30	23.96	34.30	24.38	13.68	1.09	1.26	1.35	1.46
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	5.54	9.24	7.79	5.68	9.16	9.37	44.27	29.66	1.32	2.26	2.17	1.63	5.18	7.66	9.89	5.34	0.53	0.16	0.26	0.23
<b>S- II</b>	26.27	14.12	17.68	24.4	50.98	51.12	79.97	76.6	6.28	7.30	6.47	6.8	16.67	57.28	30.02	19.18	1.32	1.31	1.31	1.45
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	6.28	3.32	2.66	4.92	6.62	6.21	24.38	25.45	3.57	3.11	2.10	1.87	6.86	26.75	10.52	9.19	0.26	0.20	0.19	0.20



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**TABLE - 6.1(Contd)**  
**MEAN BIOCHEMISTRY DATA ON MALE GOATS**

	CRE(mg/dl)				ALP (U/L)				T-BIL (mg/dl)				D-BIL (mg/dl)				NPN			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CON TRO L</b>	0.75	0.78	0.38	0.16	181.33	205.83	218.17	211	0.23	0.35	0.16	0.15	0.05	0.10	0.08	0.07	36.14	39.36	43.37	47.28
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	0.08	0.08	0.23	0.16	103.99	73.35	105.63	80.74	0.15	0.28	0.02	0.02	0.04	0.06	0.01	0.02	1.82	3.06	6.19	2.02
<b>S- I</b>	0.92	0.80	0.55	0.26	147.00	146.0	174.67	223.0	0.17	0.28	0.18	0.15	0.05	0.11	0.08	0.07	39.50	47.28	45.24	38.97
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	0.17	0.11	0.48	0.09	37.76	76.55	106.90	67.98	0.04	0.08	0.04	0.04	0.02	0.04	0.02	0.02	3.25	1.72	2.87	2.62
<b>S- II</b>	0.83	0.93	1.04	0.18	298.83	101	156.88	230.33	0.18	0.35	0.21	0.20	0.03	0.04	0.11	0.09	37.18	45.60	45.08	44.68
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	0.22	0.12	0.36	0.09	207.66	20.55	77.99	110.80	0.03	0.05	0.05	0.12	0.03	0.04	0.03	0.06	3.96	2.42	2.76	3.34





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**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB -CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**Confidential**

**TABLE-6.1 (Contd)**  
**MEAN BIOCHEMISTRY DATA ON MALE GOATS**

	Ca (Mm/l)				LDH(U/L)				CK (U/L)				TP (gm/dl)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CONT ROL</b>	7.92 ? 0.35	9.52 ? 0.51	8.07 ? 0.85	8.68 ? 1.37	349.83 ? 91.09	287.33 ? 37.95	330.17 ? 73.66	443.5 ? 89.61	250.17 ? 95.98	280 ? 54.86	250.67 ? 115.89	270.33 ? 59.36	6.98 ? 0.57	6.65 ? 0.36	7.52 ? 1.33	7.23 ? 0.70
<b>S- I</b>	8.17 ? 0.40	9.50 ? 0.64	8.52 ? 0.71	8.80 ? 0.49	371.83 ? 23.22	386 ? 139.71	450 ? 160.26	519.17 ? 221.85	175.33 ? 52.00	292.67 ? 129.75	287.5 ? 132.24	301.17 ? 139.44	6.85 ? 0.44	6.52 ? 0.54	8.3 ? 0.75	7.88 ? 0.37
<b>S- II</b>	7.72 ? 0.67	9.13 ? 0.33	7.55 ? 0.80	8.43 ? 0.54	362.50 ? 125.46	387.83 ? 99.71	431.67 ? 88.39	471.0 ? 82.5	179.50 ? 60.34	257 ? 83.47	196.33 ? 24.78	246.5 ? 54.06	6.65 ? 0.72	6.8 ? 0.65	7.55 ? 0.87	8.02 ? 0.35

\* P = 0.05



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**TABLE - 6.2**  
**MEAN BIOCHEMISTRY DATA ON FEMALE GOATS**

	ALB (g/dl)				CHO (mg/dl)				GLU (mg/dl)				TG (mg/dl)				GOT (U/l)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CONT ROL</b>	3.40	3.32	2.77	3.08	78.17	70.33	72.33	74.33	44.83	33.67	31	20.0	13.67	15.67	22	32.33	107.7	88.00	101.8	113.1
	? 0.54	? 0.54	? 0.47	? 0.15	? 21.03	? 15.69	? 17.87	? 27.64	? 25.65	? 11.78	? 11.71	? 4.56	? 4.18	? 9.20	? 10.45	? 21.03	? 25.07	? 27.14	? 17.05	? 23.58
<b>S- I</b>	3.57	7.63	3.22	3.25	84.50	78.50	80.67	66.5	33.50	41.83	28.17	28.17	17.00	14.67	32.17	52.67	113.8	116.6	119.6	134.1
	? 0.42	? 10.96	? 0.49	? 0.38	? 20.12	? 28.51	? 20.44	? 7.79	? 17.07	? 12.64	? 6.31	? 9.00	? 9.84	? 4.32	? 18.88	? 44.41	? 16.14	? 31.24	? 20.86	? 40.22
<b>S- II</b>	3.33	3.20	3.28	3.12	76.17	98	90.50	80.17	39.50	37.33	43.50	28.67	13.17	15	31.67	27.17	96.55	107.9	161.2	116.8
	? 0.37	? 0.11	? 0.53	? 0.71	? 23.96	? 7.97	? 26.46	? 21.15	? 10.56	? 13.65	? 26.06	? 6.12	? 3.87	? 1.90	? 12.08	? 17.50	? 20.07	? 22.80	? 57.17	? 8.63

\* P = 0.05

(Contd)



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**TABLE - 6.2 (Contd)**  
**MEAN BIOCHEMISTRY DATA ON FEMALE GOATS**

	GPT (U/L)				GGT (U/L)				Phos (mM/L)				Urea (mg/dl)				Nitrogen			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CONT ROL</b>	29.85	22.13	18.45	25.5	46.23	58.37	54.23	62.45	6.95	6.80	6.83	6.55	24.78	29.43	18.92	13.45	1.27	1.28	1.22	1.13
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	3.70	7.58	3.77	4.30	14.01	13.92	24.71	11.11	2.84	2.09	1.98	0.83	7.37	7.03	6.37	3.30	0.16	0.29	0.25	0.49
<b>S- I</b>	28.35	19.65	21.33	24.75	62.98	50.87	85.77	92.88	5.60	6.80	6.77	7.15	25.13	38.22	16.78	12.50	1.40	1.84	1.42	1.25
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	4.32	9.93	4.11	2.89	15.50	3.77	33.96	41.96	1.82	2.85	1.34	1.07	5.87	21.76	7.48	6.30	0.08	1.09	0.18	0.22
<b>S- II</b>	25.07	17.43	20.08	22.78	49.03	52.93	87.22	79.92	6.43	5.32	6.63	8.65	24.40	35.33	27.62	11.62	1.31	1.28	1.38	1.36
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	±	±	±	±
	2.21	1.39	2.38	6.01	8.93	12.90	28.48	20.93	1.09	0.12	1.78	3.45	6.15	4.67	10.43	4.64	0.22	0.19	0.12	0.17



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**TABLE - 6.2 (Contd)**  
**MEAN BIOCHEMISTRY DATA ON FEMALE GOATS**

	CRE(mg/dl)				ALP (U/L)				T-BIL (mg/dl)				D-BIL (mg/dl)				NPN			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CON TRO L</b>	0.83	0.83	0.73	0.19	236.1	183.0	156.1	246	0.14	0.34	0.18	0.15	0.14	0.18	0.09	0.06	44.04	34.94	46.26	40.60
	?	?	?	?	7?	?	7?	?	?		?	?	?	?	?	?	±	±	±	±
	0.16	0.10	0.29	0.10	63.69	98.55	60.72	84.71	0.05	0.12	0.05	0.04	0.14	0.09	0.03	0.03	4.51	1.11	2.70	8.37
<b>S - I</b>	0.82	0.85	0.57	0.13	239.3	128.6	247.7	176.8	0.22	0.35	0.19	0.18	0.13	0.09	0.09	0.15	39.29	40.34	39.6	40.6
	?	?	?	?	3?	7?	8?	3?	?	?	?	?	?	?	?	?	±	±	±	±
	0.13	0.15	0.54	0.11	113.6	76.93	122.5	57.21	0.06	0.10	0.22	0.03	0.13	0.06	0.02	0.06	4.28	6.11	4.96	6.48
<b>S - II</b>	0.87	0.95	0.88	0.14	156.1	140.8	177.3	198.1	0.20	0.30	0.24	0.13	0.04	0.06	0.10	0.06	38.36	40.23	43.29	44.92
	?	?	?	?	7?	3?	3?	7?	?	?	?	?	?	?	?	?	±	±	±	±
	0.21	0.10	0.63	0.08	70.71	72.45	107.7	145.6	0.05	0.08	0.11	0.03	0.03	0.06	0.02	0.02	4.94	5.90	3.22	2.57
								1												



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**TABLE-6.2 (Contd)**  
**MEAN BIOCHEMISTRY DATA ON FEMALE GOATS**

	Ca (Mm/l)				LDH(U/L)				CK (U/L)				TP (gm/dl)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>CONT ROL</b>	7.35	9.45	7.25	8.5	398.17	406.33	410.17	509	226.17	345.17	270.17	273.67	6.63	6.67	6.58	7.52
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
	0.63	0.46	0.36	0.32	59.83	168.44	136.42	80.83	43.10	165.73	43.91	82.98	0.92	0.55	0.68	0.83
<b>S- I</b>	8.08	9.27	8.12	8.68	431.33	336	424.67	587.67	303.00	234	232.50	287.67	7.03	6.55	7.72	7.65
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
	0.70	0.72	0.66	0.56	89.03	86.4	95.05	156.96	66.15	115.06	46.80	152	0.69	0.389	0.98	0.36
<b>S- II</b>	7.90	9.18	7.5	7.63	319.93	268.83	447.83	595	237.00	301.50	197	247.17	6.90	6.52	7.45	7.30
	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
	078	0.73	0.42	0.60	66.77	21.76	113.87	250.92	116.66	108.06	48.09	59.51	0.46	0.46	1.18	0.69

\* P = 0.05



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**TABLE-6.3  
 CONTROL GROUP  
 BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	ALB (g/dl)				CHO (mg/dl)				GLU (mg/dl)				TG (mg/dl)				GOT (U/I)				
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	
MALE																					
1	3.4	3.6	2.79	3.4	68	83	52	59	27	21	42	28	11	12	29	23	72.8	54.6	110	98.5	
2	3.6	3.0	3.2	3.0	86	64	112	38	33	37	28	14	15	17	64	17	96.8	81.8	92.9	154.8	
3	3.3	3.3	4.2	2.3	69	63	68	43	30	34	35	33	08	14	62	23	86.7	67.5	120.6	109.2	
4	3.5	3.4	3.0	3.3	53	71	112	64	25	40	21	18	15	14	44	27	92.8	107.8	92.5	108.5	
5	3.4	3.3	3	2.4	79	70	82	48	38	29	31	38	16	15	34	26	80.4	83.5	96.5	102.6	
6	3.1	2.9	2.3	3.0	82	57	39	101	55	31	34	22	20	35	9	56	94.8	59.4	64.4	95.1	
MEAN	3.38	3.25	3.07	2.9	72.83	68.00	77.5	58.83	34.67	32.00	31.83	25.5	14.17	22.17	40.33	28.67	87.38	75.77	96.15	111.45	
SD	0.17	0.26	0.64	0.46	12.06	8.94	30.41	22.83	10.97	6.69	7.08	22.83	4.17	12.09	20.94	13.84	9.33	19.53	19.09	21.94	
FEMALE																					
7	3.5	3.3	2.6	2.9	78	83	71	101	38	30	21	13	11	09	15	57	95.6	85.6	78.4	92.8	
8	3.4	4.0	2.2	3.1	90	81	57	107	41	34	26	26	12	15	31	61	81.8	125.6	121	90.2	
9	4.2	2.9	2.7	3.0	81	58	61	76	95	30	34	23	19	34	15	21	121.4	62.6	119.7	132.2	
10	3.5	3.6	3.6	3.0	94	83	107	77	43	21	47	20	19	13	26	20	138.3	60.2	107.5	129.7	
11	2.5	2.5	2.6	3.3	37	85	67	44	26	56	17	21	11	11	20	12	70.4	78.5	92.8	93.1	
12	3.3	3.6	2.9	3.2	89	72	71	41	26	31	41	17	10	12	25	23	102.7	115.5	91.6	142.7	
MEAN	3.40	3.32	2.77	3.08	78.17	70.33	72.33	74.33	44.83	33.67	31	20.0	13.67	15.67	22	32.33	107.7	88.00	101.83	113.12	
SD	0.54	0.54	0.47	0.15	21.03	15.69	17.87	27.64	25.65	11.78	11.71	4.56	4.18	9.20	10.45	21.03	25.07	27.14	17.05	23.58	

(Contd)



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**TABLE-6.3 (Contd)**  
**CONTROL GROUP**  
**BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Day S	GPT (U/L)				GGT (U/L)				Phos (mM/L)				Urea (mg/dl )				Nitrogen(gm%)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
Male																				
1	26.1	12.7	15	24.6	47.5	49.0	81.9	74.5	10.5	8.0	9	9.2	19.3	31.6	5.7	4.0	1.03	1.17	1.33	1.05
2	29.6	18.5	28.4	27.8	68.2	39.3	55.5	71.3	4.9	7.8	6.6	8.6	36.8	32.1	13.2	15.4	1.02	1.28	1.55	1.07
3	24.7	20.6	32.8	15.1	74.1	83.9	98.8	70.3	4.0	6.1	8.6	8.8	27.1	20.8	19.7	5.5	1.03	1.47	1.69	1.09
4	19.5	20.1	19	29.4	62.3	54.6	90.8	83.5	6.2	7.5	3.9	8.9	21.8	24.9	29.2	15.8	1.11	1.54	1.48	1.46
5	20.6	14.4	19.2	14.2	63.7	71.5	71.5	73.1	4.4	5.1	9	9.9	10.6	28.7	15.6	4.7	1.12	1.30	1.56	1.48
6	17.4	20.7	9.8	31.2	73.3	76.5	88.7	50.7	6.6	5.6	3.6	6.5	13.5	18.3	31.7	13.7	1.24	1.36	1.11	1.30
Mean	<b>22.98</b>	<b>17.83</b>	<b>20.7</b>	<b>23.72</b>	<b>64.85</b>	<b>62.47</b>	<b>81.20</b>	<b>70.57</b>	<b>6.10</b>	<b>6.70</b>	<b>6.78</b>	<b>8.65</b>	<b>21.52</b>	<b>26.07</b>	<b>19.18</b>	<b>9.85</b>	<b>1.09</b>	<b>1.35</b>	<b>1.45</b>	<b>1.24</b>
SD	<b>4.58</b>	<b>3.45</b>	<b>8.51</b>	<b>7.36</b>	<b>9.77</b>	<b>17.42</b>	<b>15.58</b>	<b>10.81</b>	<b>2.38</b>	<b>1.22</b>	<b>2.51</b>	<b>1.15</b>	<b>9.52</b>	<b>5.72</b>	<b>9.88</b>	<b>5.67</b>	<b>0.08</b>	<b>0.13</b>	<b>0.21</b>	<b>0.20</b>
Female																				
7	30.2	21.4	16.2	30.8	46.8	46.2	44.5	49.5	5.3	5.0	5.6	6.5	21.6	33.9	24.7	12.6	1.12	1.07	1.06	1.04
8	28.9	31.4	20.7	27.3	48.4	72.6	74.9	55.0	4.4	8.8	6	6.4	30.9	36.4	13.2	11.1	1.47	1.04	1.55	1.08
9	35.1	20.1	21.3	20.6	46.0	75.4	50.4	67.1	7.1	5.8	5.3	6.0	36.2	19.6	15.9	17.1	1.26	1.09	1.06	1.46
10	28.2	14.7	22.7	21.0	70.5	47.8	91.3	72.6	11.6	8.2	10.7	6.0	23.2	31.8	17.9	17.7	1.34	1.78	1.04	1.51
11	24.3	14.2	17.1	29.3	36.7	44.6	41.3	54.0	4.5	4.1	6.6	6.2	16.2	21.6	28.6	9.4	1.38	1.45	1.01	1.46
12	32.4	31.0	12.7	24.0	29.0	63.6	23	76.5	8.8	8.9	6.8	8.2	20.6	33.3	13.2	12.8	1.04	1.26	1.44	.22
Mean	<b>29.85</b>	<b>22.13</b>	<b>18.45</b>	<b>25.5</b>	<b>46.23</b>	<b>58.37</b>	<b>54.23</b>	<b>62.45</b>	<b>6.95</b>	<b>6.80</b>	<b>6.83</b>	<b>6.55</b>	<b>24.78</b>	<b>29.43</b>	<b>18.92</b>	<b>13.45</b>	<b>1.27</b>	<b>1.28</b>	<b>1.22</b>	<b>1.13</b>
SD	<b>3.70</b>	<b>7.58</b>	<b>3.77</b>	<b>4.30</b>	<b>14.01</b>	<b>13.92</b>	<b>24.71</b>	<b>11.11</b>	<b>2.84</b>	<b>2.09</b>	<b>1.98</b>	<b>0.83</b>	<b>7.37</b>	<b>7.03</b>	<b>6.37</b>	<b>3.30</b>	<b>0.16</b>	<b>0.29</b>	<b>0.25</b>	<b>0.49</b>



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**TABLE-6.3 (Contd)**  
**CONTROL GROUP**  
**BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	CRE(mg/dl)				ALP (U/L)				T-BIL (mg/dl)				D-BIL (mg/dl)				NPN(mg%)				
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	
<b>Male</b>																					
1	0.8	0.8	0.4	0.04	139	85	131	238	0.17	0.47	0.18	0.17	0.05	0.18	0.09	0.08	37.23	44.78	46.97	47.94	
2	0.9	0.7	0.1	0.11	146	162	367	238	0.16	0.85	0.12	0.12	0.06	0.6	0.06	0.06	35.26	40.2	48.13	48.16	
3	0.7	0.9	0.2	0.25	331	260	251	102	0.31	0.13	0.16	0.18	0.01	0.03	0.08	0.09	36.15	36.48	38.16	47.19	
4	0.7	0.7	0.3	0.10	51	203	164	261	0.49	0.31	0.17	0.15	0.13	0.13	0.09	0.07	34.08	39.12	33.17	43.58	
5	0.7	0.8	0.70	0.45	281	285	301	122	0.10	0.16	0.14	0.13	0.03	0.08	0.07	0.03	39.15	36.45	46.58	47.18	
6	0.7	0.8	0.6	0.02	140	240	95	305	0.15	0.15	0.17	0.13	0.04	0.04	0.08	0.06	34.98	39.15	47.19	49.61	
<b>Mean</b>	<b>0.75</b>	<b>0.78</b>	<b>0.38</b>	<b>0.16</b>	<b>181.33</b>	<b>205.83</b>	<b>218.17</b>	<b>211</b>	<b>0.23</b>	<b>0.35</b>	<b>0.16</b>	<b>0.15</b>	<b>0.05</b>	<b>0.10</b>	<b>0.08</b>	<b>0.07</b>	<b>36.14</b>	<b>39.36</b>	<b>43.37</b>	<b>47.28</b>	
<b>SD</b>	<b>0.08</b>	<b>0.08</b>	<b>0.23</b>	<b>0.16</b>	<b>103.99</b>	<b>73.35</b>	<b>105.63</b>	<b>80.74</b>	<b>0.15</b>	<b>0.28</b>	<b>0.02</b>	<b>0.02</b>	<b>0.04</b>	<b>0.06</b>	<b>0.01</b>	<b>0.02</b>	<b>1.82</b>	<b>3.06</b>	<b>6.19</b>	<b>2.02</b>	
<b>Female</b>																					
7	0.8	0.8	0.7	0.02	177	324	173	313	0.20	0.29	0.15	0.12	0.03	0.25	0.07	0.05	48.36	33.18	47.92	30.19	
8	0.9	1.0	0.7	0.23	279	202	201	363	0.13	0.34	0.11	0.12	0.40	0.18	0.05	0.04	49.16	34.79	46.19	31.04	
9	0.6	0.7	0.8	0.15	313	244	115	181	0.21	0.14	0.21	0.13	0.12	0.03	0.10	0.06	40.19	36.59	48.67	40.16	
10	0.8	0.8	0.2	0.18	219	87	236	183	0.13	0.46	0.17	0.15	0.19	0.23	0.08	0.07	46.17	34.79	46.19	47.64	
11	0.8	0.8	1	0.26	152	59	67	155	0.07	0.48	0.24	0.23	0.04	0.13	0.12	0.11	42.19	35.48	41.12	49.67	
12	1.1	0.9	1	0.29	277	182	145	281	0.12	0.32	0.22	0.14	0.04	0.28	0.11	0.02	38.19	34.78	47.46	44.87	
<b>Mean</b>	<b>0.83</b>	<b>0.83</b>	<b>0.73</b>	<b>0.19</b>	<b>236.17</b>	<b>183.0</b>	<b>156.17</b>	<b>246</b>	<b>0.14</b>	<b>0.34</b>	<b>0.18</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.09</b>	<b>0.06</b>	<b>44.04</b>	<b>34.94</b>	<b>46.26</b>	<b>40.60</b>	
<b>SD</b>	<b>0.16</b>	<b>0.10</b>	<b>0.29</b>	<b>0.10</b>	<b>63.69</b>	<b>98.55</b>	<b>60.72</b>	<b>84.71</b>	<b>0.05</b>	<b>0.12</b>	<b>0.05</b>	<b>0.04</b>	<b>0.14</b>	<b>0.09</b>	<b>0.03</b>	<b>0.03</b>	<b>4.51</b>	<b>1.11</b>	<b>2.70</b>	<b>8.37</b>	





**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

PROJECT NO. : TOX-346GOAT  
 PRODUCT : Bt COTTONSEEDS  
 STUDY : SUB -CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOATS  
 REPORT NO. : 000061486  
 DATE : 29.09.2007

*Confidential*

**TABLE-6.3 (Contd)  
 CONTROL GROUP  
 BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	Ca (Mm/l)				LDH(U/L)				CK (U/L)				TP (gm/dl)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>Male</b>																
1	7.8	9.2	7.7	8.9	374	288	314	5.32	325	210	179	250	6.3	6.6	8.1	7.6
2	8.3	9.0	9.3	11.3	424	294	439	448	178	254	312	291	6.9	6.2	8.5	5.9
3	8.1	10.4	8.5	7.4	462	307	399	404	198	273	332	251	7.5	7.3	8.5	7.1
4	8.1	9.6	8.3	8.3	324	330	308	392	406	293	177	297	7.8	6.7	8.3	7.5
5	7.9	9.7	7.8	8.0	207	217	267	324	233	376	404	178	6.5	6.5	6.3	7.4
6	7.3	9.2	6.8	8.2	308	288	254	561	161	274	100	355	6.9	6.6	5.4	7.9
<b>Mean</b>	<b>7.92</b>	<b>9.52</b>	<b>8.07</b>	<b>8.68</b>	<b>349.83</b>	<b>287.33</b>	<b>330.17</b>	<b>443.5</b>	<b>250.17</b>	<b>280</b>	<b>250.67</b>	<b>270.33</b>	<b>6.98</b>	<b>6.65</b>	<b>7.52</b>	<b>7.23</b>
<b>SD</b>	<b>0.35</b>	<b>0.51</b>	<b>0.85</b>	<b>1.37</b>	<b>91.09</b>	<b>37.95</b>	<b>73.66</b>	<b>89.61</b>	<b>95.98</b>	<b>54.86</b>	<b>115.89</b>	<b>59.36</b>	<b>0.57</b>	<b>0.36</b>	<b>1.33</b>	<b>0.70</b>
<b>Female</b>																
7	8.1	9.5	7.4	8.3	414	338	299	548	276	446	319	347	7.0	6.9	6.6	7.7
8	7.5	9.7	6.9	8.9	377	626	380	461	219	572	297	318	6.7	7.4	6	8.1
9	8.0	9.4	7.5	8.4	472	291	375	555	187	271	242	213	7.5	6.6	6.4	7.5
10	6.5	9.3	6.7	8.2	418	295	682	551	181	215	225	205	6.5	6.7	7.9	7.4
11	7.0	8.7	7.6	8.9	293	269	355	574	213	120	312	376	4.9	5.7	6.4	8.4
12	7.0	10.1	7.4	8.3	412	619	370	365	281	507	226	183	7.2	6.7	6.2	6.0
<b>Mean</b>	<b>7.35</b>	<b>9.45</b>	<b>7.25</b>	<b>8.5</b>	<b>398.17</b>	<b>406.33</b>	<b>410.17</b>	<b>509</b>	<b>226.17</b>	<b>345.17</b>	<b>270.17</b>	<b>273.67</b>	<b>6.63</b>	<b>6.67</b>	<b>6.58</b>	<b>7.52</b>
<b>SD</b>	<b>0.63</b>	<b>0.46</b>	<b>0.36</b>	<b>0.32</b>	<b>59.83</b>	<b>168.44</b>	<b>136.42</b>	<b>80.83</b>	<b>43.10</b>	<b>165.73</b>	<b>43.91</b>	<b>82.98</b>	<b>0.92</b>	<b>0.55</b>	<b>0.68</b>	<b>0.83</b>



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

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**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

**Confidential**

**TABLE –6.4**  
**NON-Bt COTTONSEEDS (SAMPLE –I)**  
**BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	ALB (g/dl)				CHO (mg/dl)				GLU (mg/dl)				TG (mg/dl)				GOT (U/l)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
Male																				
13	3.6	3.0	3.3	3.6	92	83	67	64	43	29	43	33	14	12	39	27	73.3	112.7	139	92.6
14	3.5	2.9	4.2	3.4	77	94	82	66	25	34	31	20	15	16	160	30	67.3	64.9	227.5	98.2
15	3.4	2.4	3.3	3.4	88	45	92	64	44	56	102	22	16	11	17	41	90.0	79.6	111.6	110.5
16	3.5	3.1	3.2	4.0	47	65	126	63	32	38	24	30	16	17	72	51	99.6	83.8	110.8	127.6
17	3.6	3.6	3.9	3.6	51	73	69	70	38	31	35	25	17	12	31	130	70.0	114.2	99.1	222.5
18	3.7	3.1	2.8	2.8	76	68	69	59	33	39	25	34	09	17	14	30	93.6	83.3	101.2	139.4
Mean	3.55	3.02	3.45	3.47	71.83	71.33	84.17	64.33	35.83	37.83	43.33	27.33	14.50	14.17	55.5	51.50	82.30	89.75	131.53	131.80
SD	0.10	0.39	0.51	0.39	18.78	60.72	22.68	3.61	7.25	9.70	29.57	5.85	2.88	2.79	55.26	39.49	13.74	19.61	49.12	47.79
Female																				
19	3.7	2.8	3.4	3.1	47	50	116	70	30	58	29	25	14	13	67	22	123.9	87.3	95.3	166.9
20	3.6	3.0	3.2	2.6	87	83	84	68	35	28	28	23	12	12	28	40	109.9	114.1	123.7	116.0
21	4.1	3.5	2.9	3.2	87	74	57	52	27	39	21	17	11	15	11	25	102.5	109.2	112.2	124.5
22	3.6	3.0	2.8	3.6	83	94	69	72	28	29	21	28	19	14	22	138	92.5	147.4	132.2	198.4
23	2.8	2.8	2.9	3.4	98	47	87	73	68	55	34	43	10	11	32	63	138.3	82.4	152.2	105.5
24	3.6	3.7	4.1	3.6	105	123	71	64	23	42	36	33	36	23	33	28	115.7	159.5	102.5	93.6
Mean	3.57	7.63	3.22	3.25	84.50	78.50	80.67	66.5	33.50	41.83	28.17	28.17	17.00	14.67	32.17	52.67	113.80	116.65	119.68	134.16
SD	0.42	10.96	0.49	0.38	20.12	28.51	20.44	7.79	17.07	12.64	6.31	9.00	9.84	4.32	18.88	44.41	16.14	31.24	20.86	40.22

(Contd)



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

**PROJECT NO. : TOX-346GOAT**  
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**STUDY : SUB -CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

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**TABLE-6.4 (Contd)**  
**NON-Bt COTTONSEEDS (SAMPLE -I)**  
**BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	GPT (U/L)				GGT (U/L)				Phos (mM/L)				Urea (mg/dl)				Nitrogen(gm%)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
Male																				
13	27.7	38.9	24.5	22.4	59.5	49.2	85.2	79.5	5.3	10.8	5.4	9.3	21.1	45.5	14.7	4.0	1.04	1.35	1.64	1.05
14	19.8	19.1	32.2	25.7	57.1	49.8	178.5	87.3	7.3	7.1	7.3	8.8	22.4	34.9	25.3	14.5	.06	1.07	1.58	1.47
15	20.6	13.5	15.2	21.4	50.4	42.3	73.9	71.5	4.6	4.0	10.2	10.1	16.3	22.3	22.6	14.4	1.25	1.06	1.46	1.67
16	31.3	19.9	12.7	35.1	75.2	40.4	78.1	84.6	5.8	8.1	4.7	8.9	26.1	33.9	41.1	17.6	1.26	1.45	1.34	1.47
17	22.0	29.1	24.1	33.3	50.6	65.3	86	152.2	7.1	9.0	8.9	7.0	31.3	35.1	14.5	19.9	1.34	1.36	1.09	1.67
18	32.3	18.3	13.5	25.6	55.1	41.3	50.6	86.1	8.0	8.2	5.7	5.7	26.5	34.1	28.1	12.4	1.58	1.25	1.0	1.45
Mean	25.62	23.13	20.37	27.25	57.98	48.05	92.05	93.55	6.35	7.87	7.03	8.30	23.96	34.30	24.38	13.68	1.09	1.26	1.35	1.46
SD	5.54	9.24	7.79	5.68	9.16	9.37	44.27	29.66	1.32	2.26	2.17	1.63	5.18	7.66	9.89	5.34	0.53	0.16	0.26	0.23
Female																				
19	30.5	15.3	28.7	28.1	40.8	49.1	52.2	65.3	4.0	4.4	6.6	7.1	23.8	22.4	12.3	8.3	1.36	1.09	1.54	1.23
20	32.0	38.7	18.6	22.1	66.1	49.8	74.1	134.2	6.0	10.8	5.8	5.5	20.7	44.2	19.6	11.5	1.47	04	1.44	1.58
21	31.6	20.5	17.8	23.8	66.8	55.2	49.3	73.8	7.1	7.6	6.5	6.9	35.7	24.4	21.6	12.8	1.36	1.89	1.46	1.47
22	30.3	18.0	19.3	28.7	64.2	55.8	124.4	155.9	6.3	4.4	7.3	7.0	19.8	36.0	26	19.6	1.45	1.34	1.47	1.07
23	22.4	15.1	20.1	23.1	87.1	46.4	26.7	51.3	2.8	4.3	5.3	7.6	23.1	23.3	16.4	19.4	1.28	1.26	1.56	1.09
24	23.3	10.3	23.5	22.7	52.9	48.9	87.9	76.7	7.4	9.3	9.1	8.8	27.7	79.0	4.8	3.4	1.47	1.47	1.06	1.08
Mean	28.35	19.65	21.33	24.75	62.98	50.87	85.77	92.88	5.60	6.80	6.77	7.15	25.13	38.22	16.78	12.50	1.40	1.84	1.42	1.25
SD	4.32	9.93	4.11	2.89	15.50	3.77	33.96	41.96	1.82	2.85	1.34	1.07	5.87	21.76	7.48	6.30	0.08	1.09	0.18	0.22



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

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**TABLE-6.4 (Contd)**  
**NON-Bt COTTONSEEDS (SAMPLE -I)**  
**BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	CRE(mg/dl)				ALP (U/L)				T-BIL (mg/dl)				D-BIL (mg/dl)				NPN(mg%)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>Male</b>																				
13	1.0	0.9	0.2	0.20	160	245	317	269	0.19	0.19	0.17	0.18	0.05	0.08	0.08	0.09	36.02	48.79	45.48	40.2
14	1.0	0.9	0.9	0.30	171	49	128	293	0.12	0.28	0.21	0.15	0.03	0.05	0.11	0.07	37.12	47.48	46.58	41.08
15	0.9	0.7	0.7	0.18	95	59	74	217	0.14	0.43	0.17	0.14	0.05	0.13	0.08	0.06	38.16	44.12	42.56	38.17
16	0.6	0.7	1.1	0.39	129	171	86	209	0.15	0.24	0.18	0.12	0.07	0.12	0.09	0.06	40.25	46.89	47.69	34.15
17	1.1	0.9	0.1	0.15	126	183	300	100	0.19	0.31	0.20	0.21	0.01	0.16	0.10	0.09	40.26	47.58	48.12	39.15
18	0.9	0.7	1.1	0.32	201	169	143	250	0.21	0.24	0.25	0.11	0.06	0.12	0.04	0.05	45.16	48.79	41.01	41.08
<b>Mean</b>	<b>0.92</b>	<b>0.80</b>	<b>0.55</b>	<b>0.26</b>	<b>147.00</b>	<b>146.0</b>	<b>174.67</b>	<b>223.0</b>	<b>0.17</b>	<b>0.28</b>	<b>0.18</b>	<b>0.15</b>	<b>0.05</b>	<b>0.11</b>	<b>0.08</b>	<b>0.07</b>	<b>39.50</b>	<b>47.28</b>	<b>45.24</b>	<b>38.97</b>
<b>SD</b>	<b>0.17</b>	<b>0.11</b>	<b>0.48</b>	<b>0.09</b>	<b>37.76</b>	<b>76.55</b>	<b>106.90</b>	<b>67.98</b>	<b>0.04</b>	<b>0.08</b>	<b>0.04</b>	<b>0.04</b>	<b>0.02</b>	<b>0.04</b>	<b>0.02</b>	<b>0.02</b>	<b>3.25</b>	<b>1.72</b>	<b>2.87</b>	<b>2.62</b>
<b>Female</b>																				
19	0.7	0.8	0.14	0.24	142	66	378	208	0.25	0.49	0.16	0.17	0.04	0.12	0.08	0.07	42.06	37.18	39.16	47.44
20	0.7	0.9	0.01	0.23	174	242	218	149	0.17	0.21	0.17	0.18	0.08	0.11	0.08	0.08	39.15	33.18	34.18	45.22
21	0.9	0.6	1.17	0.04	228	206	111.7	183	0.22	0.30	0.19	0.21	0.06	0.15	0.09	0.10	36.15	35.18	36.17	46.18
22	1.0	1.0	1	0.02	441	82	369	112	0.13	0.37	0.21	0.20	0.06	0.02	0.13	0.09	33.07	48.16	38.17	34.18
23	0.9	0.8	1	0.03	295	62	104	138	0.24	0.43	0.21	0.13	0.16	0.14	0.09	0.06	40.12	42.16	42.08	36.17
24	0.7	1.0	0.09	0.20	156	114	306	271	0.30	0.32	0.19	0.20	0.38	0.02	0.09	0.09	45.16	46.19	48.17	33.54
<b>Mean</b>	<b>0.82</b>	<b>0.85</b>	<b>0.57</b>	<b>0.13</b>	<b>239.33</b>	<b>128.67</b>	<b>247.78</b>	<b>176.83</b>	<b>0.22</b>	<b>0.35</b>	<b>0.19</b>	<b>0.18</b>	<b>0.13</b>	<b>0.09</b>	<b>0.09</b>	<b>0.15</b>	<b>39.29</b>	<b>40.34</b>	<b>39.66</b>	<b>40.46</b>
<b>SD</b>	<b>0.13</b>	<b>0.15</b>	<b>0.54</b>	<b>0.11</b>	<b>113.65</b>	<b>76.93</b>	<b>122.57</b>	<b>57.21</b>	<b>0.06</b>	<b>0.10</b>	<b>0.22</b>	<b>0.03</b>	<b>0.13</b>	<b>0.06</b>	<b>0.02</b>	<b>0.06</b>	<b>4.28</b>	<b>6.11</b>	<b>4.96</b>	<b>6.48</b>



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

**PROJECT NO. : TOX-346GOAT**  
**PRODUCT : Bt COTTONSEEDS**  
**STUDY : SUB -CHRONIC (90 DAYS) ORAL TOXICITY STUDY IN GOATS**  
**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

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**TABLE-6.4 (Contd)**  
**NON-Bt COTTONSEEDS (SAMPLE -I)**  
**BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	Ca (Mm/l)				LDH(U/L)				CK (U/L)				TP (gm/dl)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>Male</b>																
13	8.8	8.8	8.1	9.2	344	344	550	448	136	346	263	208	7.2	6.4	9.5	7.9
14	8.2	9.5	9.7	8.3	366	488	722	307	207	263	546	247	6.2	6.3	8.4	7.7
15	7.8	8.7	8.0	9.5	382	269	303	386	121	118	293	182	6.7	5.6	7.6	7.8
16	7.7	9.8	8.9	8.6	411	293	358	493	263	259	189	337	7.0	7.0	8.1	8.0
17	8.4	10.3	8.6	8.9	356	622	436	862	161	511	204	564	6.6	6.8	8.7	7.4
18	8.1	9.9	7.8	8.3	372	300	331	699	164	259	230	269	7.4	7.0	7.5	8.5
<b>Mean</b>	<b>8.17</b>	<b>9.50</b>	<b>8.52</b>	<b>8.80</b>	<b>371.83</b>	<b>386</b>	<b>450</b>	<b>519.17</b>	<b>175.33</b>	<b>292.67</b>	<b>287.5</b>	<b>301.17</b>	<b>6.85</b>	<b>6.52</b>	<b>8.3</b>	<b>7.88</b>
<b>SD</b>	<b>0.40</b>	<b>0.64</b>	<b>0.71</b>	<b>0.49</b>	<b>23.22</b>	<b>139.71</b>	<b>160.26</b>	<b>221.85</b>	<b>52.00</b>	<b>129.75</b>	<b>132.24</b>	<b>139.44</b>	<b>0.44</b>	<b>0.54</b>	<b>0.75</b>	<b>0.37</b>
<b>Female</b>																
19	8.5	9.7	9	8.5	376	254	443	608	382	87	310	400	7.6	6.3	8.7	7.7
20	8.5	9.0	7.9	8.5	431	338	400	468	309	341	176	146	7.2	6.5	8.1	7.6
21	8.6	10.2	7.1	7.9	441	342	325	466	300	296	250	243	7.6	6.8	7.0	8.1
22	8.5	9.1	7.8	9.6	601	488	344	695	241	308	239	543	7.3	7.1	7.0	7.3
23	7.0	9.5	8.4	8.9	374	250	590	839	217	88	224	187	5.8	6.0	6.6	7.2
24	7.4	8.1	8.5	8.7	369	344	446	450	369	284	196	207	6.7	6.6	8.9	8.0
<b>Mean</b>	<b>8.08</b>	<b>9.27</b>	<b>8.12</b>	<b>8.68</b>	<b>431.33</b>	<b>336</b>	<b>424.67</b>	<b>587.67</b>	<b>303.00</b>	<b>234</b>	<b>232.50</b>	<b>287.67</b>	<b>7.03</b>	<b>6.55</b>	<b>7.72</b>	<b>7.65</b>
<b>SD</b>	<b>0.70</b>	<b>0.72</b>	<b>0.66</b>	<b>0.56</b>	<b>89.03</b>	<b>86.4</b>	<b>95.05</b>	<b>156.96</b>	<b>66.15</b>	<b>115.06</b>	<b>46.80</b>	<b>152.</b>	<b>0.69</b>	<b>0.389</b>	<b>0.98</b>	<b>0.36</b>



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**PROJECT NO. : TOX-346GOAT**  
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**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

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**TABLE-6.5**  
**Bt COTTONSEEDS (SAMPLE –II)**  
**BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	ALB (g/dl)				CHO (mg/dl)				GL (mg/dl)				TG (mg/dl)				GOT (U/l)				
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	
<b>MALE</b>																					
<b>25</b>	3.5	3.6	3.4	3.0	115	121	127	102	43	43	25	15	10	23	77	62	91.8	156.7	111.6	84.2	
<b>26</b>	3.3	2.7	3.3	3.0	67	48	112	104	29	54	22	20	10	13	46	40	78.1	81.4	94.1	87.8	
<b>27</b>	2.5	3.2	3.4	3.6	77	102	98	85	92	42	25	19	16	16	32	38	87.1	160.3	118.7	109.5	
<b>28</b>	3.6	3.9	3.0	2.8	87	129	54	60	27	44	15	14	10	25	21	16	89.8	169.2	129.2	98.8	
<b>29</b>	3.0	3.2	2.8	3.0	83	103	84	63	36	34	31	27	09	18	49	17	62.4	158.0	148.9	125.3	
<b>30</b>	3.9	3.7	2.9	3.5	86	127	124	107	39	43	39	26	11	24	41	30	84.6	164.5	96	97.9	
<b>MEAN</b>	<b>3.30</b>	<b>3.38</b>	<b>3.13</b>	<b>3.15</b>	<b>85.83</b>	<b>105</b>	<b>99.83</b>	<b>86.83</b>	<b>44.33</b>	<b>41.67</b>	<b>26.17</b>	<b>20.17</b>	<b>11.00</b>	<b>19.83</b>	<b>44.33</b>	<b>33.83</b>	<b>82.3</b>	<b>148.35</b>	<b>121.43</b>	<b>100.58</b>	
<b>SD</b>	<b>0.49</b>	<b>0.44</b>	<b>0.27</b>	<b>0.32</b>	<b>16.08</b>	<b>30.26</b>	<b>27.66</b>	<b>21.08</b>	<b>24.11</b>	<b>7.92</b>	<b>8.16</b>	<b>5.42</b>	<b>2.53</b>	<b>4.88</b>	<b>18.97</b>	<b>17.12</b>	<b>10.85</b>	<b>33.12</b>	<b>22.79</b>	<b>15.05</b>	
<b>FEMALE</b>																					
<b>31</b>	3.8	3.3	3.4	2.4	50	96	88	51	45	54	64	21	11	18	28	14	82.3	133.7	128.8	109.5	
<b>32</b>	3.7	3.3	3.0	2.2	82	96	75	65	46	48	20	21	10	15	27	21	80.7	128.1	192.2	116.3	
<b>33</b>	3.2	3.1	4.3	3.2	83	96	82	97	53	23	45	31	20	13	55	26	101.2	79.9	122.2	131.0	
<b>34</b>	2.9	3.3	2.9	3.4	46	113	122	99	25	30	30	31	15	13	28	21	86.1	103.1	265.1	115.7	
<b>35</b>	3.0	3.1	3.2	3.4	109	98	121	100	30	23	84	33	10	16	32	19	94.7	83.6	129.4	107.1	
<b>36</b>	3.4	3.1	2.9	4.1	87	89	55	69	38	46	19	35	13	15	20	62	134.3	119.2	130.4	121.5	
<b>MEAN</b>	<b>3.33</b>	<b>3.20</b>	<b>3.28</b>	<b>3.12</b>	<b>76.17</b>	<b>98</b>	<b>90.50</b>	<b>80.17</b>	<b>39.50</b>	<b>37.33</b>	<b>43.50</b>	<b>28.67</b>	<b>13.17</b>	<b>15</b>	<b>31.67</b>	<b>27.17</b>	<b>96.55</b>	<b>107.93</b>	<b>161.22</b>	<b>116.85</b>	
<b>SD</b>	<b>0.37</b>	<b>0.11</b>	<b>0.53</b>	<b>0.71</b>	<b>23.96</b>	<b>7.97</b>	<b>26.46</b>	<b>21.15</b>	<b>10.56</b>	<b>13.65</b>	<b>26.06</b>	<b>6.12</b>	<b>3.87</b>	<b>1.90</b>	<b>12.08</b>	<b>17.50</b>	<b>20.07</b>	<b>22.80</b>	<b>57.17</b>	<b>8.63</b>	

(Contd)



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

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**REPORT NO. : 000061486**  
**DATE : 29.09.2007**

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**TABLE-6.5 (Contd)**  
**Bt COTTONSEEDS (SAMPLE -II)**  
**BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	GPT (U/L)				GGT (U/L)			Phos (mM/L)					Urea (mg/dl )				Nitrogen(gm%)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
Male																				
25	29.7	11.1	13.1	27.0	47.4	46.1	82	14.2	3.4	10.0	4.8	6.4	23.2	80.4	43.3	12.5	1.54	1.35	1.49	1.55
26	24.9	13.1	20.8	17.3	49.0	44.5	86.9	77.7	12.3	4.3	3.9	4.2	10.6	23.0	29	27.5	1.32	1.46	1.42	1.46
27	16.0	18.8	18.8	26.9	50.0	59.6	75.1	87.6	3.6	4.4	8.4	7.3	18.7	39.3	36.6	26.8	1.25	1.48	1.46	1.67
28	33.3	11.6	19.3	25.0	45.4	50.5	69.3	83.1	8.3	10.5	6.3	9.8	20.0	82.1	35.6	27.5	1.05	1.47	1.33	1.47
29	23.1	17.8	17	19.8	64.0	57.7	120.3	114.8	3.5	4.7	6	7.3	21.6	38.0	16.5	6.7	1.04	1.08	1.09	1.48
30	30.6	12.3	17.1	30.4	50.1	48.3	46.2	47.2	6.6	9.9	9.4	5.8	5.9	80.9	19.1	14.1	1.69	1.04	1.07	1.08
MEAN	26.27	14.12	17.68	24.4	50.98	51.12	79.97	76.6	6.28	7.30	6.47	6.8	16.67	57.28	30.02	19.18	1.32	1.31	1.31	1.45
SD	6.28	3.32	2.66	4.92	6.62	6.21	24.38	25.45	3.57	3.11	2.10	1.87	6.86	26.75	10.52	9.19	0.26	0.20	0.19	0.20
FEMALE																				
31	27.4	19.3	17.5	14.4	49.0	51.2	71.5	102.1	8.1	5.2	5.4	5.5	25.8	40.2	22	4.2	1.05	1.11	1.25	1.10
32	25.4	16.4	20.3	17.6	35.9	51.7	99.2	70.7	5.4	5.2	4.6	4.5	29.5	40.0	44.3	9.4	1.11	1.08	1.56	1.22
33	26.3	17.9	21.1	22.6	62.0	45.6	80.5	46.1	5.2	5.3	9.2	8.2	31.4	31.2	21.1	11.5	1.18	1.23	1.34	1.46
34	21.1	15.3	22.5	26.0	51.4	78.4	139.5	80.7	6.4	5.3	8.3	11.6	23.5	30.1	26.8	14.1	1.48	1.45	1.46	1.48
35	24.2	17.7	16.9	25.1	49.2	43.1	63.8	78.2	7.2	5.4	5.7	13.5	22.1	32.1	25.5	12.5	1.46	1.56	1.37	1.34
36	26.0	18.0	22.2	31.0	46.7	47.6	68.8	101.5	6.3	5.5	6.6	8.6	14.1	38.4	36	18.0	1.56	1.23	1.27	1.54
MEAN	25.07	17.43	20.08	22.78	49.03	52.93	87.22	79.92	6.43	5.32	6.63	8.65	24.40	35.33	27.62	11.62	1.31	1.28	1.38	1.36
SD	2.21	1.39	2.38	6.01	8.93	12.90	28.48	20.93	1.09	0.12	1.78	3.45	6.15	4.67	10.43	4.64	0.22	0.19	0.12	0.17



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TABLE-6.5 (Contd)  
 Bt COTTONSEEDS (SAMPLE –II)  
 BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS

Days	CRE(mg/dl)				ALP (U/L)				T-BIL (mg/dl)				D-BIL (mg/dl)				NPN(mg%)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>Male</b>																				
25	1.0	0.9	1.1	0.22	308	107	87.3	345	0.16	0.29	0.20	0.11	0.09	0.01	0.1	0.06	37.12	46.60	47.58	40.15
26	0.9	0.7	0.35	0.19	219	68	170	159	0.18	0.44	0.19	0.16	0.02	0.10	0.09	0.06	33.64	45.31	42.15	48.45
27	0.4	1.0	1.17	0.08	53	84	115	298	0.22	0.34	0.28	0.15	0.03	0.07	0.11	0.07	39.14	48.57	46.39	46.15
28	0.9	1.0	1.39	0.30	476	120	303	332	0.17	0.31	0.25	0.19	0.03	0.03	0.10	0.08	31.54	45.69	41.05	41.09
29	0.9	1.0	1.03	0.08	599	110	157	71	0.14	0.39	0.21	0.16	0.01	0.01	0.08	0.07	39.49	41.23	47.13	47.12
30	0.9	1.0	1.19	0.20	136	117	109	177	0.22	0.34	0.14	0.45	0.01	0.01	0.16	0.21	42.15	46.18	46.18	45.10
<b>MEAN</b>	<b>0.83</b>	<b>0.93</b>	<b>1.04</b>	<b>0.18</b>	<b>298.83</b>	<b>101</b>	<b>156.88</b>	<b>230.33</b>	<b>0.18</b>	<b>0.35</b>	<b>0.21</b>	<b>0.20</b>	<b>0.03</b>	<b>0.04</b>	<b>0.11</b>	<b>0.09</b>	<b>37.18</b>	<b>45.60</b>	<b>45.08</b>	<b>44.68</b>
<b>SD</b>	<b>0.22</b>	<b>0.12</b>	<b>0.36</b>	<b>0.09</b>	<b>207.66</b>	<b>20.55</b>	<b>77.99</b>	<b>110.80</b>	<b>0.03</b>	<b>0.05</b>	<b>0.05</b>	<b>0.12</b>	<b>0.03</b>	<b>0.04</b>	<b>0.03</b>	<b>0.06</b>	<b>3.96</b>	<b>2.42</b>	<b>2.76</b>	<b>3.34</b>
<b>FEMAL</b>																				
31	1.0	1.0	0.02	0.16	248	202	222	58	0.18	0.23	0.17	0.13	0.01	0.16	0.08	0.06	47.14	49.10	40.12	47.15
32	1.2	1.1	1.38	0.24	214	204	49	41	0.28	0.24	0.46	0.11	0.09	0.13	0.14	0.04	39.14	45.68	41.02	40.156
33	0.7	0.9	0.16	0.09	116	49	294	441	0.18	0.38	0.20	0.16	0.01	0.02	0.10	0.08	37.14	38.47	45.12	46.80
34	0.7	0.8	1.26	0.03	114	156	126	200	0.22	0.35	0.17	0.14	0.04	0.01	0.08	0.07	33.40	34.17	46.17	44.20
35	0.7	0.9	1	0.10	61	51	79	199	0.17	0.38	0.20	0.09	0.03	0.05	0.09	0.04	39.18	38.47	40.15	46.04
36	0.9	1.0	1.43	0.22	184	183	294	250	0.15	0.21	0.23	0.16	0.04	0.15	0.11	0.08	34.17	35.46	47.18	45.15
<b>MEAN</b>	<b>0.87</b>	<b>0.95</b>	<b>0.88</b>	<b>0.14</b>	<b>156.17</b>	<b>140.83</b>	<b>177.33</b>	<b>198.17</b>	<b>0.20</b>	<b>0.30</b>	<b>0.24</b>	<b>0.13</b>	<b>0.04</b>	<b>0.06</b>	<b>0.10</b>	<b>0.06</b>	<b>38.36</b>	<b>40.23</b>	<b>43.29</b>	<b>44.92</b>
<b>SD</b>	<b>0.21</b>	<b>0.10</b>	<b>0.63</b>	<b>0.08</b>	<b>70.71</b>	<b>72.45</b>	<b>107.7</b>	<b>145.61</b>	<b>0.05</b>	<b>0.08</b>	<b>0.11</b>	<b>0.03</b>	<b>0.03</b>	<b>0.06</b>	<b>0.02</b>	<b>0.02</b>	<b>4.94</b>	<b>5.90</b>	<b>3.22</b>	<b>2.57</b>





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**TABLE-6.5 (Contd)  
 Bt COTTONSEEDS (SAMPLE –II)  
 BIOCHEMICAL ANALYSIS ON DIFFERENT DAYS**

Days	Ca (Mm/l)				LDH(U/L)				CK (U/L)				TP (gm/dl)			
	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90	Day 0	Day 30	Day 60	Day 90
<b>Male</b>																
25	7.5	9.0	8.6	9.0	569	351	366	442	184	279	181	315	6.0	6.4	8.4	7.7
26	7.5	9.0	8.1	8.9	341	247	315	329	215	88	170	179	6.0	5.9	8.6	7.9
27	6.9	9.3	7	8.5	283	502	436	485	105	302	180	299	6.9	7.6	7.8	8.7
28	8.2	9.4	6.5	8.5	438	364	427	516	275	386	237	219	7.2	6.8	7.2	7.8
29	7.4	9.5	8	8.2	212	506	570	482	163	305	199	206	6.1	7.5	6.4	8.0
30	8.8	8.6	7.1	7.5	332	357	476	512	135	282	211	261	7.7	6.6	6.9	8.0
<b>MEAN</b>	<b>7.72</b>	<b>9.13</b>	<b>7.55</b>	<b>8.43</b>	<b>362.50</b>	<b>387.83</b>	<b>431.67</b>	<b>471.0</b>	<b>179.50</b>	<b>257</b>	<b>196.33</b>	<b>246.5</b>	<b>6.65</b>	<b>6.8</b>	<b>7.55</b>	<b>8.02</b>
<b>SD</b>	<b>0.67</b>	<b>0.33</b>	<b>0.80</b>	<b>0.54</b>	<b>125.46</b>	<b>99.71</b>	<b>88.39</b>	<b>82.5</b>	<b>60.34</b>	<b>83.47</b>	<b>24.78</b>	<b>54.06</b>	<b>0.72</b>	<b>0.65</b>	<b>0.87</b>	<b>0.35</b>
<b>FEMAL</b>																
31	8.6	8.4	7.6	7.0	301	256	391	425	178	383	147	189	6.9	6.8	8.3	7.1
32	8.9	8.6	7.9	7.3	223	246	559	472	166	387	158	175	6.9	6.7	6.8	6.3
33	7.5	9.2	7.5	8.0	416	271	328	439	458	164	159	288	7.5	6.0	9.4	6.9
34	8.2	10.4	7.5	7.7	290	306	589	918	159	323	258	255	7.3	7.2	6.6	7.7
35	7.1	9.6	7.8	7.2	317	279	365	917	183	167	220	243	6.5	6.1	6.3	7.5
36	7.1	8.9	6.7	8.6	369	255	425	399	278	385	240	333	6.3	6.3	7.3	8.3
<b>MEAN</b>	<b>7.90</b>	<b>9.18</b>	<b>7.5</b>	<b>7.63</b>	<b>319.93</b>	<b>268.83</b>	<b>447.83</b>	<b>595</b>	<b>237.00</b>	<b>301.50</b>	<b>197</b>	<b>247.17</b>	<b>6.90</b>	<b>6.52</b>	<b>7.45</b>	<b>7.30</b>
<b>SD</b>	<b>0.78</b>	<b>0.73</b>	<b>0.42</b>	<b>0.60</b>	<b>66.77</b>	<b>21.76</b>	<b>113.87</b>	<b>250.92</b>	<b>116.66</b>	<b>108.06</b>	<b>48.09</b>	<b>59.51</b>	<b>0.46</b>	<b>0.46</b>	<b>1.18</b>	<b>0.69</b>



# SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A unit of Shriram Scientific and Industrial Research Foundation)

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## TEST CERTIFICATE

000061486

Issued to :  
METAHELIX LIFE SCIENCES PVT. LTD.  
PLOT NO. 3, KIADB 4TH PHASE,  
BOMMASANDRA  
BANGALORE - 560099 KARNATAKA

J.O.No. TOX 346GOAT  
Reg.No. 4612570  
Date 29-09-2007  
GC-01 (REV-04)  
Your Ref.No. --

Kind Attn: DR. M.J. VASUDEVA RAO , PRESIDENT

Sample Particulars :  
One sample of "Bt Cottonseeds" was received for Sub-acute (90 days) repeated oral toxicity study in goats.

Material Description : Non-Bt Cottonseeds (Sample-I)- Yellowish brown coloured powder  
Bt Cottonseeds (Sample-II)- Yellowish brown coloured powder.

Sponsor : Metahelix Life Sciences Private Limited  
Plot no.3, KIADB 4<sup>th</sup> Phase, Bommasandra,  
Bangalore-560 099, India.

### TEST RESULTS

#### Sub-acute (90 days) oral toxicity study in goats

Under the conditions of this study, the oral administration of 'Bt Cottonseeds (Sample-II)' in goats daily for 90 days did not induce any observable toxic effects, when compared with the goats fed on Non-Bt Cottonseeds (Sample-I) and control group of goats.

(Annexure enclosed)

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DOR : 06-11-2006  
DOC : 28-09-2007

*M. Aggarwal*  
AUTHORISED SIGNATORY  
(EMPLOYEE CODE: 6006)

### PCR & ELISA CONFIRMATION OF BIOSAFETY COTTONSEED MATERIAL

Objective: Quality Control of the cottonseed material from cry1C-9124 based intrahirsutum hybrids to be used for the biosafety studies; despatched on 11<sup>th</sup> September 2006.

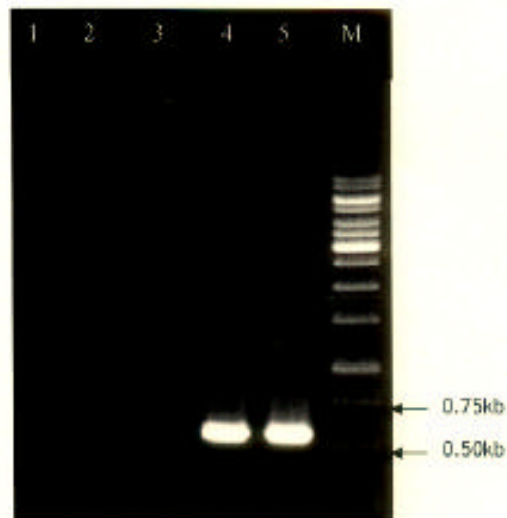
1. Confirmation of transgenic nature by PCR specific to the transgene
2. Confirmation of presence of Cry1C protein and its quantitation by ELISA

#### PCR confirmation

PCR was performed on Eppendorf Mastercycler Gradient machine with the following primers:

Upper: 5'-CCT CGC CAT TCT TCG TGA TTC C  
 Lower: 5'-GGT TGG CCT CCC TTC CGT AGA TA

1. H<sub>2</sub>O CONTROL
2. -VE CONTROL (LEAF)
3. NON TRANSGENIC SEED DNA
4. TRANSGENIC SEED DNA
5. +VE CONTROL



EXPECTATION- 0.58 KB

#### Results and conclusion

As expected amplification from cry1C was observed in case of transgenic and positive control proving the presence of the gene. Water and negative controls were clear indicating the absence of gene.

Metahelix Life Sciences Private Limited

Plot No. 3, KIADB 4th Phase, Bommasandra, Bangalore 560 099, India.  
 Tel: +91-80-787 0236, 783 6086 Fax: +91-80-783 6084 www.meta-helix.com

### ELISA confirmation

Quantitative ELISA for Cry1C protein was performed using the Quantiplate kit for Cry1C (Enviroligix, USA; Catalog No. AP 007) according to the manufacturer's protocol

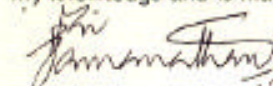
Sl no	Entry ID	A <sub>450</sub>	Cry1C concentration (µg/g on fresh wt)
1	Blank	0.09	NA
2	1 ppb standard	0.3	0.92
3	5 ppb standard	1.44	5.2
4	10 ppb standard	2.21	9.93
5	Nontransgenic	0.092	NA
6	Transgenic	2.9	13.08

### Results

The absorbance value observed at 450nm for nontransgenic sample was nearly the same as blank and no colour development was observed in case of nontransgenic. Blue colour development was observed in case of transgenic samples indicating the presence of Cry1C protein.

### Declaration

I hereby declare that the certificate of quality presented above is true to the best of my knowledge and is made on the basis of experiments carried out in our premises.



Val. Ramanathan

Head - Genomics