



**SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH**

Confidential

PROJECT NO. : TOX-355B  
 PRODUCT : NHH 44 Bt-COTTON SEEDS  
 STUDY : SUB CHRONIC ORAL TOXICITY STUDY IN RATS  
 REPORT NO. : 000046990  
 DATE : 18.5.2007

**TABLE - 3.01**  
**MEAN HAEMATOLOGY DATA OF MALE RATS**  
**DURATION : 90 DAYS TIME : TERMINAL SACRIFICE**

Animal Group	WBC Count (x10 <sup>3</sup> )	DIFFERENTIAL					RBC count (x10 <sup>6</sup> )	Hb gm %	HCT %	Platelets Count
		L%	N%	E%	M%	B%				
<b>Control (Corn Oil)</b>	7.44	85.00	13.80	0.60	0.60	0.00	8.54	15.43	46.27	10.91
	± 1.57	± 4.11	± 3.82	± 0.52	± 0.52	± 0.00	± 0.33	± 0.48	± 1.61	± 1.62
<b>NHH 44 Bt-Cotton seeds</b>	7.64	79.90	18.40	0.90	0.80	0.00	8.33	15.36	45.85	9.49
	± 1.74	± 6.85	± 6.64	± 0.57	± 0.42	± 0.00	± 0.37	± 0.66	± 2.47	± 2.13
<b>NHH 44 Non Bt-Cotton seeds</b>	8.04	84.50	14.30	0.80	0.40	0.00	8.53	15.91	47.73	10.44
	± 1.32	± 3.03	± 2.98	± 0.42	± 0.52	± 0.00	± 0.33	± 0.59	± 1.77	± 2.20

\* P ≤ 0.05



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**TABLE - 3.02**  
**MEAN HAEMATOLOGY DATA OF FEMALE RATS**  
**DURATION : 90 DAYS TIME : TERMINAL SACRIFICE**

Animal Group	WBC Count (x10 <sup>3</sup> )	DIFFERENTIAL					RBC count (x10 <sup>6</sup> )	Hb gm %	HCT % L%	Platelets Count N%
		L%	N%	E%	M%	B%				
<b>Control (Corn Oil)</b>	8.37 ± 1.93	84.10 ± 5.00	14.60 ± 4.30	0.80 ± 0.63	0.50 ± 0.53	0.00 ± 0.00	7.95 ± 0.35	15.02 ± 0.28	44.56 ± 1.24	10.72 ± 1.10
<b>NHH 44 Non Bt-Cotton seeds</b>	7.77 ± 1.82	84.00 ± 3.77	14.70 ± 3.86	0.90 ± 0.32	0.40 ± 0.52	0.00 ± 0.00	7.46 ± 0.20	14.65 ± 0.43	41.51 ± 1.28	9.65 ± 1.43
<b>NHH 44 Bt-Cotton seeds</b>	7.01 ± 0.44	84.70 ± 3.50	13.80 ± 3.61	0.80 ± 0.42	0.70 ± 0.48	0.00 ± 0.00	7.58 ± 0.43	14.80 ± 0.69	41.96 ± 2.68	10.37 ± 1.22

\* P ≤ 0.05



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TABLE - 3.03  
HAEMATOLOGY DATA OF MALE RATS (CONTOL GROUP) AT TERMINAL SACRIFICE

Animal No.	Sex	WBC Count (x10 <sup>3</sup> )	DIFFERENTIAL					RBC count (x10 <sup>6</sup> )	Hb gm %	HCT %	Platelets Count
			L%	N%	E%	M%	B%				
1	M	10.8	82.0	16.0	1.0	1.0	0.0	8.4	15.3	45.6	11.0
2	M	7.9	81.0	17.0	1.0	1.0	0.0	8.8	16.0	48.0	11.2
3	M	8.2	81.0	18.0	1.0	0.0	0.0	9.0	15.9	46.7	8.5
4	M	9.4	84.0	15.0	1.0	0.0	0.0	9.1	15.6	46.8	10.9
5	M	6.9	83.0	16.0	1.0	0.0	0.0	8.5	15.3	45.9	10.1
6	M	8.6	86.0	13.0	0.0	1.0	0.0	7.2	16.3	48.9	6.3
7	M	10.2	90.0	10.0	0.0	0.0	0.0	8.8	15.7	47.1	9.9
8	M	9.6	81.0	18.0	0.0	1.0	0.0	8.5	14.7	44.1	10.5
9	M	7.9	89.0	10.0	1.0	0.0	0.0	9.1	15.5	46.5	8.1
10	M	7.7	92.0	8.0	0.0	0.0	0.0	8.7	16.1	48.3	8.7
Mean ± S.D		7.44 ± 1.57	85.00 ± 4.11	13.80 ± 3.82	0.60 ± 0.52	0.60 ± 0.52	0.00 ± 0.00	8.54 ± 0.33	15.43 ± 0.48	46.27 ± 1.61	9.52 ± 1.58



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TABLE -3.04  
HAEMATOLOGY DATA OF FEMALE RATS (CONTROL GROUP) AT TERMINAL SACRIFICE

Animal No.	Sex	WBC Count (x10 <sup>3</sup> )	DIFFERENTIAL					RBC count (x10 <sup>6</sup> )	Hb gm %	HCT %	Platelets Count
			L%	N%	E%	M%	B%				
1	F	7.8	89.0	10.0	1.0	0.0	0.0	8.0	14.4	43.2	9.8
2	F	8.9	84.0	15.0	0.0	1.0	0.0	7.9	14.6	43.5	9.4
3	F	7.1	80.0	20.0	0.0	0.0	0.0	7.9	14.5	43.2	12.0
4	F	7.5	86.0	13.0	1.0	0.0	0.0	8.1	15.4	46.2	11.3
5	F	6.8	85.0	14.0	1.0	0.0	0.0	8.4	15.3	46.8	9.7
6	F	7.1	81.0	19.0	0.0	0.0	0.0	7.9	15.1	44.3	10.2
7	F	8.6	86.0	12.0	1.0	1.0	0.0	8.3	14.8	44.4	9.5
8	F	6.7	84.0	15.0	0.0	1.0	0.0	7.6	14.0	42.2	10.3
9	F	6.2	85.0	14.0	1.0	0.0	0.0	7.7	15.0	43.3	11.7
10	F	9.3	82.0	17.0	0.0	1.0	0.0	8.0	15.0	45.0	9.1
Mean		8.37	84.10	14.60	0.80	0.50	0.00	7.95	15.02	44.56	10.72
±		±	±	±	±	±	±	±	±	±	±
S.D		1.93	5.00	4.30	0.63	0.53	0.00	0.35	0.28	1.24	1.10



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TABLE - 3.05  
HAEMATOLOGY DATA OF MALE RATS (NHH 44 Bt-COTTON SEEDS) AT TERMINAL SACRIFICE

Animal No.	Sex	WBC Count (x10 <sup>3</sup> )	DIFFERENTIAL					RBC count (x10 <sup>6</sup> )	Hb gm %	HCT %	Platelets Count
			L%	N%	E%	M%	B%				
1	M	7.4	79.0	20.0	0.0	1.0	0.0	8.4	15.3	45.9	12.0
2	M	14.2	83.0	15.0	1.0	1.0	0.0	9.0	15.4	48.6	10.6
3	M	6.9	84.0	15.0	1.0	0.0	0.0	9.0	15.5	47.5	7.8
4	M	7.4	79.0	19.0	1.0	1.0	0.0	7.7	14.1	42.2	10.1
5	M	6.4	84.0	15.0	0.0	1.0	0.0	7.0	13.8	40.6	10.8
6	M	6.4	81.0	17.0	1.0	1.0	0.0	8.8	16.2	58.6	11.0
7	M	7.7	90.0	8.0	1.0	1.0	0.0	8.3	15.4	46.2	9.7
8	M	6.2	84.0	15.0	0.0	1.0	0.0	8.2	15.3	45.9	10.7
9	M	8.1	89.0	9.0	1.0	1.0	0.0	8.4	14.6	43.2	11.3
10	M	6.8	85.0	13.0	1.0	1.0	0.0	8.4	15.4	45.2	9.8
Mean		7.64	79.90	18.40	0.90	0.80	0.00	8.33	15.36	45.85	9.49
±		±	±	±	±	±	±	±	±	±	±
S.D		1.74	6.85	6.64	0.57	0.42	0.00	0.37	0.66	2.47	2.13



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**TABLE - 3.06**  
**HAEMATOLOGY DATA OF FEMALE RATS (NHH 44 Bt-COTTON SEEDS) AT TERMINAL SACRIFICE**

Animal No.	SEX	WBC Count (x10 <sup>3</sup> )	DIFFERENTIAL					RBC count (x10 <sup>6</sup> )	Hb gm %	HCT %	Platelets Count
			L%	N%	E%	M%	B%				
1	F	7.5	80.0	18.0	1.0	1.0	0.0	7.4	13.9	41.6	9.2
2	F	7.2	79.0	19.0	1.0	1.0	0.0	8.1	15.3	45.9	11.1
3	F	6.9	89.0	10.0	0.0	1.0	0.0	7.1	13.9	40.7	10.1
4	F	7.1	84.0	15.0	1.0	0.0	0.0	7.6	13.9	41.4	11.3
5	F	7.6	81.0	18.0	0.0	1.0	0.0	7.5	13.5	39.9	11.1
6	F	7.4	83.0	16.0	1.0	0.0	0.0	7.7	14.3	42.3	9.9
7	F	9.6	88.0	11.0	1.0	0.0	0.0	7.5	14.8	44.0	7.9
8	F	6.4	85.0	13.0	1.0	1.0	0.0	7.3	13.4	39.1	9.8
9	F	7.2	82.0	16.0	1.0	1.0	0.0	7.8	14.5	42.6	13.0
10	F	7.5	87.0	12.0	1.0	0.0	0.0	8.0	15.6	46.8	12.1
<b>Mean</b>		7.77	84.00	14.70	0.90	0.40	0.00	7.46	14.65	41.51	9.65
<b>±</b>		±	±	±	±	±	±	±	±	±	±
<b>S.D</b>		1.82	3.77	3.86	0.32	0.52	0.00	0.20	0.43	1.28	1.43

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**TABLE - 3.07**  
**HAEMATOLOGY DATA OF MALE RATS (NHH 44 NON Bt-COTTON SEEDS) AT TERMINAL SACRIFICE**

Animal No.	SEX	WBC Count (x10 <sup>3</sup> )	DIFFERENTIAL					RBC count (x10 <sup>6</sup> )	Hb gm %	HCT %	Platelets Count
			L%	N%	E%	M%	B%				
1	M	12.3	83.0	15.0	1.0	1.0	0.0	7.7	14.5	43.4	7.2
2	M	8.8	85.0	13.0	1.0	1.0	0.0	7.5	13.1	38.9	8.2
3	M	6.5	84.0	14.0	1.0	1.0	0.0	8.4	15.0	45.0	10.9
4	M	8.3	82.0	17.0	0.0	1.0	0.0	7.6	13.9	42.1	11.0
5	M	7.2	83.0	15.0	1.0	1.0	0.0	8.0	14.9	44.7	12.1
6	M	7.2	83.0	16.0	0.0	1.0	0.0	8.6	15.4	46.2	11.4
7	M	7.1	88.0	11.0	1.0	0.0	0.0	8.7	15.5	46.5	10.5
8	M	7.4	88.0	11.0	0.0	1.0	0.0	7.8	14.2	41.8	10.8
9	M	6.9	83.0	15.0	1.0	1.0	0.0	8.0	14.3	42.9	8.8
10	M	7.6	90.0	10.0	0.0	0.0	0.0	8.3	14.9	44.7	13.2
<b>Mean</b>		8.04	84.50	14.30	0.80	0.40	0.00	8.53	15.91	47.73	10.44
<b>±</b>		±	±	±	±	±	±	±	±	±	±
<b>S.D</b>		1.32	3.03	2.98	0.42	0.52	0.00	0.33	0.59	1.77	2.20



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TABLE - 3.08  
HAEMATOLOGY DATA OF FEMALE RATS (NHH 44 NON Bt-COTTON SEEDS) AT TERMINAL SACRIFICE

Animal No.	SEX	WBC Count (x10 <sup>3</sup> )	DIFFERENTIAL					RBC count (x10 <sup>6</sup> )	Hb gm %	HCT %	Platelets Count
			L%	N%	E%	M%	B%				
1	F	6.9	83.0	16.0	1.0	0.0	0.0	7.5	13.7	40.3	10.1
2	F	6.8	90.0	10.0	0.0	0.0	0.0	7.6	14.5	42.3	11.4
3	F	7.4	80.0	18.0	1.0	1.0	0.0	8.3	15.8	47.4	10.3
4	F	7.6	82.0	17.0	0.0	1.0	0.0	7.0	13.7	40.3	9.9
5	F	7.0	87.0	12.0	0.0	1.0	0.0	7.5	13.8	40.4	10.3
6	F	6.5	83.0	15.0	1.0	1.0	0.0	7.6	13.7	41.2	8.9
7	F	9.6	85.0	13.0	1.0	1.0	0.0	7.9	15.1	44.0	10.1
8	F	7.5	88.0	12.0	0.0	0.0	0.0	8.4	15.3	45.9	9.9
9	F	7.2	83.0	15.0	1.0	1.0	0.0	7.7	14.6	42.6	9.9
10	F	7.4	87.0	13.0	0.0	0.0	0.0	7.4	14.8	42.6	12.2
Mean		7.01	84.70	13.80	0.80	0.70	0.00	7.58	14.80	41.96	10.37
±		±	±	±	±	±	±	±	±	±	±
S.D		0.44	3.50	3.61	0.42	0.48	0.00	0.43	0.69	2.68	1.22



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