

Appendix - 1 : Individual data on male animals of Experiment 1(a), (b).

Animal No.	Weaning weight (g)	Weight (g) at 11 weeks of age	Weight gain 3-11 weeks	Food intake 3-11 weeks	Weight at 16 weeks of age	Weight gain 11-16 weeks	Food intake 11-16 weeks	Open field activity squares traversed	Activity in an activity wheel		
									Number of rotations	Standing up rotations	Grooming (second)
1	2	3	4	5	6	7	8	9	10	11	12

Litter size 4, weaning weight > 45 g, postweaning ad libitum

37	45	290	245	985	385	99	750	41	1.50	28	90
33	49	291	243	1010	401	110	770	48	1.50	17	45
51	45	285	240	990	410	125	790	49	1.25	22	25
35	48	285	237	950	329	44	690	52	2.50	26	32
19	45	280	235	990	392	112	780	49	1.75	17	80
52	45	260	215	1000	370	110	760	52	1.50	21	20

Litter size 4, weaning weight > 45 g, postweaning, 80% ad lib.

50	41	243	202	800	401	148	760	52	2.00	35	60
54	48	249	201	800	405	156	810	51	2.50	20	50
53	47	248	201	800	395	147	790	51	4.00	22	55

Appendix - 1 : contd..

1	2	3	4	5	6	7	8	9	10	11	12
55	46	243	197	600	372	129	770	52	3.00	15	10
49	49	244	195	600	343	99	690	44	2.50	18	30
48	50	238	188	600	389	151	810	53	8.50	20	0
Litter size 4, weaning weight 45 g, postweaning, 66% ad lib.											
57	45	231	186	660	372	141	800	49	3.50	10	30
58	45	224	179	660	365	141	770	52	3.75	20	35
56	47	225	178	660	388	163	820	51	4.25	23	45
55	45	220	175	660	349	129	780	50	4.50	18	30
59	48	186	150	660	347	149	800	51	2.25	19	50
60	46	196	150	660	317	101	750	50	3.50	20	5
Litter size 4, weaning weight 45 g, postweaning, 50% ad lib.											
65	45	202	157	500	332	126	810	37	4.00	10	20
64	48	203	155	500	322	119	800	34	3.75	9	10
66	45	198	153	500	312	114	790	41	4.25	5	25
67	48	193	145	500	303	110	780	38	3.50	10	20

Appendix - 1 : contd.

1	2	3	4	5	6	7	8	9	10	11	12
69	46	187	141	500	333	146	830	40	4.50	8	16
68	47	185	138	500	293	108	780	37	6.00	8	10
<u>Litter size 8, weaning weight 35-45 g. postweaning ad lib.</u>											
3	35	306	271	1100	393	87	780	47	2.50	30	80
4	38	294	256	990	414	120	760	45	2.50	35	25
34	41	295	254	1000	392	97	730	44	1.50	20	30
2	40	179	239	1030	401	122	780	46	1.50	25	32
1	40	277	237	1000	407	130	780	46	2.25	17	55
36	41	271	230	980	363	98	750	45	2.50	26	60
<u>Litter size 8, weaning weight 35-45 g. postweaning 80% ad lib.</u>											
9	38	248	210	800	393	145	800	58	3.25	17	60
23	40	240	200	800	351	117	750	54	3.50	17	20
8	37	236	199	800	396	160	820	54	6.50	20	10
20	37	233	196	800	373	140	810	52	1.25	25	0
30	39	235	196	800	390	155	780	56	4.50	10	50
7	35	222	187	800	325	103	780	57	2.50	12	40

Appendix - 1 : contd.

1	2	3	4	5	6	7	8	9	10	11	12
Littersize 8, weaning weight 35-45 g. postweaning 66% ad lib.											
61	36	230	194	660	367	137	770	48	4.50	10	30
26	38	220	182	660	328	108	750	45	4.50	12	45
14	36	210	174	660	367	137	700	48	3.25	15	40
24	35	208	173	660	330	122	780	48	8.50	18	55
13	37	206	169	660	352	146	800	25	4.75	20	90
18	38	134	96	660	347	113	750	39	10.50	5	0
Littersize 8, weaning weight 35-45 g. postweaning, 50% ad lib.											
29	35	202	167	500	308	106	700	37	8.00	8	10
71	43	207	164	500	310	103	700	49	6.25	3	0
32	37	192	155	500	340	148	780	37	28.25	0	0
70	42	194	152	500	319	125	760	36	7.50	12	15
31	37	183	146	500	296	113	720	37	4.50	10	10
16	37	159	122	500	320	161	750	32	5.50	8	5
Litter size 12, weaning weight 25-35g. postweaning ad lib.											
6	32	294	262	1020	352	158	750	40	3.50	28	50
39	28	263	235	1080	329	66	750	52	6.00	35	52

contd...

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Appendix - 1 : contd.

1	2	3	4	5	6	7	8	9	10	11	12
38	28	259	231	1000	390	131	780	50	3.00	35	45
40	27	268	231	980	397	139	730	51	1.50	10	60
5	31	258	227	950	385	127	770	48	1.50	15	70
41	34	255	221	950	360	105	760	58	3.00	26	40
42	32	238	206	950	318	90	760	51	4.00	25	60
Litter size 12, weaning weight 25-35g. postweaning 80% ad lib.											
21	27	230	203	800	315	85	700	56	3.50	18	30
45	27	230	203	800	352	122	750	56	3.75	22	40
44	34	328	194	800	355	127	760	29	4.50	19	35
43	34	218	184	800	330	112	700	60	3.00	32	90
22	34	215	181	800	328	113	720	63	3.50	3	35
10	33	178	183	800	358	180	780	57	6.00	30	60
Litter size 12, weaning weight 25-35g. postweaning 66% ad lib.											
12	33	230	197	660	345	115	760	32	4.50	10	30
25	34	222	188	660	324	102	730	29	5.25	12	25
11	33	219	186	660	353	134	780	40	3.25	15	25
63	32	207	175	660	330	123	780	35	4.75	19	30
27	25	185	160	660	251	66	690	33	5.00	5	30
62	26	186	160	660	312	126	750	34	5.25	6	15

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contd...

Appendix - 1 : contd.

1	2	3	4	5	6	7	8	9	10	11	12
Litter size 12, weaning weight 25-35g. postweaning 50% ad 1lb.											
28	27	205	178	500	312	107	760	27	7.00	10	30
72	28	189	161	500	314	125	730	33	6.00	2	20
30	29	189	160	500	315	126	770	33	7.50	13	5
47	20	183	158	500	320	136	750	35	5.75	10	4
17	20	171	142	500	296	125	740	33	6.00	10	10
46	33	174	141	500	311	137	750	34	6.25	9	5

Appendix -- 1(B) : Individual data on female animals of Experiment 1(a).

Animal No.	Weaning weight (g)	Weight at 11 weeks	Weight gain 3-11 weeks	Food intake 3-11 weeks	Weight at 16 weeks	Weight gain 11-16 weeks	Food intake 11-16 weeks
1	2	3	4	5	6	7	8
Litter size 4, weaning weight > 45g. postweaning ad lib.							
65	46	209	163	600	243	34	600
89	46	204	159	625	248	44	590
6	50	205	155	620	243	38	580
90	47	198	151	635	258	60	625
1	51	201	150	630	235	34	600
22	45	180	135	635	230	50	620
Litter size 4, weaning weight > 45g. postweaning 80% ad lib.							
79	45	200	155	500	238	38	610
78	54	200	146	500	212	11	490
82	48	190	142	500	242	52	600
80	52	192	140	500	241	49	630
81	47	187	140	500	230	52	640
32	40	178	132	500	208	30	580

contd...

Appendix - I. B(a) : contd.

1	2	3	4	5	6	7	8
<u>Litter size 4, weaning weight > 45g. postweaning 66% ad lib.</u>							
84	47	201	154	410	249	48	550
85	47	198	151	410	215	17	430
91	47	197	150	410	231	34	560
83	49	195	146	410	227	32	550
43	52	171	119	410	225	40	500
86	49	152	104	410	192	40	560
<u>Litter size 4, weaning weight > 45g. postweaning 50% ad lib.</u>							
93	46	193	147	315	221	28	480
92	46	170	124	315	209	39	490
64	45	168	123	315	221	44	500
50	45	162	117	315	203	41	540
94	45	158	113	315	207	49	520
61	51	158	107	315	210	52	540
<u>Litter size 8, weaning weight 35-45g. postweaning: ad lib.</u>							
20	37	206	171	649	238	30	580
2	36	201	165	620	253	52	600
							contd...

Appendix - I (B)a : contd.

1	2	3	4	5	6	7	8
66	41	192	151	625	241	49	600
24	41	191	150	630	227	36	550
60	40	185	145	630	239	39	530
67	42	187	145	620	243	56	610
<u>Litter size 8, weaning weight 35-45g. postweaning 80% ad lib.</u>							
7	35	202	167	500	239	37	530
38	36	198	162	500	215	17	500
59	38	200	162	500	239	39	-
76	43	192	149	500	219	27	550
97	43	163	140	500	221	38	560
37	41	178	137	500	225	45	570
36	40	176	136	500	230	54	600
<u>Litter size 8, weaning weight 35-45g. postweaning 66% ad lib.</u>							
10A	35	163	128	410	200	37	600
69	35	160	125	410	207	47	610
10	37	160	123	410	203	43	660
48	43	142	99	410	198	56	560
88	43	126	85	410	204	66	680

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contd...

	1	2	3	4	5	6	7	8
1								
2								
3								
4								
5								
6								
7								
8								

70	35	147	112	315	193	46	600
25	42	142	100	315	198	56	530
63	39	138	99	315	205	67	620
15	38	136	98	315	200	65	610
73	37	125	88	315	197	73	610
26	36	118	82	315	195	67	620

17	34	216	182	640	238	21	655
16	25	206	181	620	247	41	560
18	25	187	162	625	226	39	530
19	31	193	162	635	212	19	500
27	34	195	161	640	209	14	470
3	31	190	159	635	233	43	550
4	31	187	156	640	203	16	490
28	26	65	39	570	195	50	560

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1	2	3	4	5	6	7	8
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34	32	201	169	500	219	18	330
40	25	194	169	500	221	27	510
33	25	191	166	500	209	18	330
9	29	192	164	500	228	36	530
35	32	186	154	500	200	14	510
30	33	179	145	500	199	20	500
8	31	176	145	500	207	31	500
20	28	169	141	500	218	49	530
31	25	164	139	500	193	29	490
30	25	162	137	500	201	39	520

11	29	170	141	410	201	31	550
12	33	172	139	410	203	31	580
44	33	155	122	410	200	45	310
49	29	146	117	410	189	43	600
42	25	138	113	410	173	35	600

• • • **Primer** • • •

Appendix - I. B(a) : contd.

1	2	3	4	5	6	7	8
41	25	132	107	410	199	67	550
46	32	133	101	410	197	54	590
45	32	99	67	410	207	98	700
Litter size 12, weaning weight 25-35g. postweaning 50% ad lib.							
54	33	139	126	315	202	63	570
51	27	135	108	315	198	70	630
55	33	109	106	315	190	55	610
52	23	128	105	315	171	23	600
56	32	135	103	315	188	55	600
14	28	130	102	315	185	55	580
57	26	123	97	315	193	86	590
50	33	121	88	315	192	47	600
62	25	110	85	315	201	80	600
53	25	107	82	315	192	82	600
19	33	113	80	315	188	75	580

contd...

Appendix - I. B(b) : Individual data on female animals of Experiment 1(c).

Animal No.	Number of pups born	No. of pups surviving at weaning	Mean weight at birth	Total weight at birth	Mean weight at weaning	Total weight at weaning	Maternal weight change gestation	Maternal weight change lactation	Food intake Gestation	Food intake Lactation
1	2	3	4	5	6	7	8	9	10	11
Litter size 4, weaning weight > 45g. postweaning ad lib.										
65	9	8	5.4	49	-	-	-	-	365	
6	7	6	5.4	38	53	318	89	40	410	580
90	8	7	5.7	46	44	308	110	50	400	580
1	9	8	6.1	53	42	319	94	51	385	615
22	11	11	6.2	68	33	329	90	63	400	640
Litter size 4, weaning weight 45g. postweaning 80% ad lib.										
70	6	6	6.2	37	47	282	77	15	390	590
78	8	8	6.5	51	45	360	98	62	370	590
82	8	8	6.0	48	40	322	92	50	425	600
80	9	7	5.9	54	46	323	87	51	375	580
32	10	7	5.5	55	46	324	78	38	385	625

contd...

Appendix - I. B(b) : contd.

1	2	3	4	5	6	7	8	9	10	11
<u>Litter size 4, weaning weight > 45g. postweaning 66% ad lib.</u>										
84	10	8	6.0	48	42	336	73	43	420	610
85	10	6	4.4	44	48	288	55	45	410	600
91	11	7	5.0	55	41	289	80	50	400	580
43	12	7	4.7	56	42	294	71	47	415	600
86	12	6	5.4	64	38	230	70	4	400	580
<u>Litter size 4, weaning weight > 45g. postweaning 50% ad lib.</u>										
92	4	4	6.2	25	49	196	85	65	370	550
50	8	5	6.5	46	48	240	78	61	390	590
61	13	9	6.4	63	36	332	110	82	410	620
<u>Litter size 8, weaning weight 35-45g. postweaning, ad lib.</u>										
20	8	8	7.0	56	46	386	72	41	370	590
13	11	8	6.1	80	46	368	104	43	410	620
68	12	8	5.4	65	48	384	102	54	415	605
24	13	7	6.0	78	45	315	121	52	425	600
60	13	9	6.1	80	45	401	119	25	410	625

contd....

Appendix - I. B(b) : contd.

1	2	3	4	5	6	7	8	9	10	11
<u>Litter size 8, weaning weight 35-45g. postweaning 80% ad lib.</u>										
7	9	8	6.0	54	42	336	106	41	400	610
38	10	5	5.5	55	51	265	110	35	400	580
37	12	8	6.2	74	37	300	95	38	400	610
36	12	8	6.2	74	36	295	112	46	410	610
<u>Litter size 9, weaning weight 35-45g. postweaning 66% ad lib.</u>										
10A	8	3	6.7	54	41	123	78	2	390	550
69	9	8	6.3	55	40	320	63	67	395	610
10	10	7	6.0	60	41	247	81	79	400	600
48	11	0	6.0	66	-	-	62	-	430	-
88	14	11	5.0	80	27	299	110	91	395	580
<u>Litter size 8, weaning weight 35-45g. postweaning 50% ad lib.</u>										
3 70	10	10	5.8	58	36	360	65	62	410	660
25	16	0	5.1	82	-	-	122	8-	430	-
63	12	11	5.3	68	33	359	102	80	400	650
73	13	13	5.4	71	30	360	80	100	380	610
26	11	9	6.9	76	37	330	112	60	400	590

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contd...

Appendix - I. B(b) : Contd.

1	2	3	4	5	6	7	8	9	10	11
<u>Litter size 12, weaning weight 25-35g. postweaning ad lib.</u>										
17	17	5	6.5	46	44	220	81	35	440	600
18	8	7	6.6	54	43	301	98	40	390	590
18	10	7	5.5	55	45	313	79	-2	420	620
19	10	9	5.9	59	40	360	97	26	420	630
27	9	8	6.0	54	43	346	102	36	390	600
23	11	10	5.6	62	40	307	101	24	395	650
<u>Litter size 12, weaning weight 25-35g. postweaning 80% ad lib.</u>										
40	11	9	6.2	68	41	367	92	51	400	610
9	11	9	6.2	69	43	387	80	29	390	615
35	10	9	6.2	69	42	378	74	50	400	650
8	10	10	6.1	61	35	350	82	36	400	600
29	9	7	5.8	52	41	281	78	42	410	550
31	5	4	6.9	34	54	215	63	45	390	500

Appendix - I. B(b) : contd.

1	2	3	4	5	6	7	8	9	10	11
<u>Litter size 12, weaning weight 25-35g. postweaning 66% ad lib.</u>										
12	10	8	6.0	60	41	328	81	59	400	600
49	9	9	5.7	41	44	351	70	60	400	600
42	9	9	6.1	55	39	310	68	41	385	590
46	4	4	5.4	22	53	212	48	20	350	600
<u>Litter size 12, weaning weight 25-35g. postweaning 50% ad lib.</u>										
55	7	7	6.3	44	35	208	83	52	370	610
52	9	5	5.9	54	48	238	91	22	410	610
14	11	10	6.3	69	38	383	82	81	390	620
50	11	9	5.4	60	30	259	82	32	410	600
13	12	7	4.1	49	34	240	68	10	410	600

contd...

Appendix - I. B(c) : Individual data on female animals of Experiment 1(d).

Animal No.	Totalexploratory activity				Latency before 1st contact with pup				Percent pups retrieved			
	Day 1	Day 2 (trial 1)	Day 2 (trial 2)	Day 1	Day 2 (trial 1)	Day 2 (trial 2)	Day 1	Day 2 (trial 1)	Day 1	Day 2 (trial 1)	Day 2 (trial 2)	
1	2	3	4	5	6	7	8	9	1	9	10	
Litter size 4, weaning weight > 45g. postweaning ad lib.												
6	377	350	886	350	185	5	36	100	100	100	100	
90	502	408	800	302	180	10	33	91	100	100	100	
1	428	210	1002	411	210	5	43	100	100	100	100	
22	508	413	1013	414	231	15	100	100	100	100	100	
Litter size 4, weaning weight > 45g. postweaning 80% ad lib.												
79	530	280	898	132	170	15	100	100	100	100	100	
78	308	263	793	250	128	2	40	100	100	100	100	
82	319	320	925	302	193	8	62	100	100	100	100	
80	500	361	1020	123	185	15	28	100	100	100	100	
32	403	301	912	207	169	10	32	100	100	100	100	

contd...

Appendix - I. B(c) : contd.

1	2	3	4	5	6	7	8	9	10
<u>Litter size 4, weaning weight 45 g postweaning 60% ad lib.</u>									
84	480	300	880	303	153	50	83	100	100
95	521	409	758	no contact	170	49	25	83	0
91	385	407	1020	401	200	60	0	67	100
43	600	502	1200	471	320	72	43	87	100
86	533	490	938	215	205	58	100	100	100
<u>Litter size 4, weaning weight 45g. postweaning 50% ad lib.</u>									
92	403	303	902	no contact	no contact	65	0	0	75
50	600	417	785	223	237	70	22	100	100
61	299	600	950	200	175	82	100	87	40
<u>Litter size 6, weaning weight 35-45g postweaning, ad lib.</u>									
20	512	302	1007	312	152	3	22	100	100
2	523	370	901	400	206	9	42	100	100
66	485	300	1110	404	205	10	71	100	100
24	600	490	1150	500	225	15	75	100	100
60	530	398	1040	no contact	238	7	0	100	100

Appendix - I. B(e) : contd.

1	2	3	4	5	6	7	8	9	10
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Litter size 8, weaning weight 35-45g. postweaning 80% ad lib.

7	517	327	993	303	201	22	63	100	100
38	436	375	999	228	280	24	88	100	100
77	403	370	1007	282	230	28	82	88	88
36	389	405	1024	329	305	23	100	100	100

Litter size 8, weaning weight 35-45g. postweaning 66% ad lib.

10A	487	400	795	213	223	180	0	75	75
69	532	373	1062	315	304	180	24	92	82
10	600	310	992	313	313	175	46	100	100
88	510	410	949	420	260	165	25	100	86

Litter size 8, weaning weight 35-45g. postweaning 50% ad lib.

70	492	210	978	375	200	952	9	33	23
63	600	500	1007	no contact	450	990	0	18	36
73	600	425	1010	no contact	400	700	0	23	67
26	590	495	890	590	357	970	20	100	100

Appendix - I. B(e) : contd.

1	2	3	4	5	6	7	8	9	10
Litter size 12, weaning weight 25-35g. postweaning ad lib.									
17	512	271	520	225	200	5	22	100	100
16	362	250	840	278	150	7	22	100	100
18	409	289	750	200	85	3	37	100	100
19	413	300	1007	307	180	20	71	100	100
27	538	335	928	483	212	25	57	100	100
3	552	333	900	400	200	10	100	100	100
Litter size 12, weaning weight 25-35g. postweaning 60% ad lib.									
40	487	485	870	400	298	38	20	100	100
9	389	503	625	350	281	5	22	100	100
35	487	500	925	468	300	35	44	100	100
8	492	502	1024	498	341	31	50	100	100
29	529	412	1125	453	309	50	43	100	100
31	509	372	1120	481	307	45	67	100	100

contd...

Appendix - I. (B)c. : contd.

1	2	3	4	5	6	7	8	9	10
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Litter size 12, weaning weight 25-35g. postweaning 66% ad lib.

12	492	357	900	400	206	512	25	100	75
49	600	390	903	no contact (600)	312	268	0	0	50
42	600	600	789	no contact (600)	300	300	0	0	56
46	580	409	1020	550	273	202	38	67	100

Litter size 13, weaning weight 25-35g. postweaning 50% ad lib.

55	600	410	1101	no contact (600)	no contact (1200)	no	0	0	0
52	600	412	1200	no contact (600)	no contact (1200)	no	0	14	0
14	595	600	972	400	401	65	14	71	40
53	600	500	980	550	385	108	29	100	90
13	400	328	1200	no contact	300	700	0	80	71