

Table 1-2. Body weight change of female pups (F1) during lactation period

Exp.No. A411(079-399)

Group-No. Dose ng/kg		Days of lactation						Unit:g
		0	4	7	14	21		
00 control	N	10	10	10	10	10	10	
	Mean S.D.	6.4 0.6	10.1 1.2	16.7 2.0	34.8 3.0	57.5 3.8		
01 DES	N	10	10	10	10	10	10	
	Mean S.D.	6.5 0.9	10.5 2.0	17.4 2.8	36.5 2.8	59.2 4.4		
02 DES	N	10	10	10	10	10	10	
	Mean S.D.	6.4 0.5	10.2 1.4	16.9 2.8	35.8 4.2	57.7 6.9		
03 DES	N	9	9	9	9	9	9	
	Mean S.D.	6.4 0.8	10.5 2.3	16.8 2.9	34.9 3.6	58.5 6.1		

DES : Diethylstilbestrol

Table 2-1. Body weight change of male animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth										Unit:g					
	28	35	42	49	56	63	70	77	84	91	98	25	25	25	25	
00 Control	N	25	25	25	25	25	25	25	25	25	25	25	25	25	25	
	Mean	108.0	172.1	237.5	299.0	360.8	413.7	455.4	493.0	524.4	550.8	573.4	573.4	573.4	573.4	573.4
	S.D.	7.5	14.1	20.3	25.5	29.4	32.2	34.9	37.3	38.9	41.5	43.7	43.7	43.7	43.7	43.7
01 DES	N	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	108.2	173.5	238.7	300.3	361.7	415.7	460.4	497.5	529.1	555.1	574.3	574.3	574.3	574.3	574.3
	S.D.	9.6	13.4	17.9	23.5	26.7	32.4	35.6	38.7	42.6	44.7	47.8	47.8	47.8	47.8	47.8
02 DES	N	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	111.1	178.3	247.6	313.9	379.6	434.3	479.7	518.4	550.9	579.1	600.9	600.9	600.9	600.9	600.9
	S.D.	7.4	11.5	18.2	25.3	32.1	36.9	43.7	47.8	51.4	56.3	60.1	60.1	60.1	60.1	60.1
03 DES	N	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	115.7	184.0*	250.1	314.6	377.9	430.8	474.8	510.1	541.2	569.0	592.6	592.6	592.6	592.6	592.6
	S.D.	12.9	18.7	22.4	26.3	32.1	36.6	41.4	47.3	50.9	54.1	57.2	57.2	57.2	57.2	57.2

DES: Diethylstilbestrol  
Significantly different from 00 group \* P ≤ 0.05 (Dunnett)

Table 2-1. -continued Body weight change of male animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth										Unit:g			
	105	112	119	126	133	140	147	154	161	168	175			
00 Control 0	N	25	25	25	25	25	25	25	25	25	25	25	25	25
	Mean	595.2	614.2	629.1	644.0	655.6	666.3	676.2	685.4	696.2	709.7	717.4	717.4	717.4
	S.D.	46.9	47.6	48.9	51.6	51.2	52.4	53.9	57.6	56.9	58.3	59.4	59.4	59.4
01 DES 0.2	N	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	597.4	616.4	629.8	643.6	657.3	669.1	679.6	690.4	701.6	710.9	717.0	717.0	717.0
	S.D.	50.8	54.9	55.1	56.4	58.8	61.5	65.0	66.0	67.8	67.2	67.0	67.0	67.0
02 DES 2	N	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	625.5	646.3	663.5	676.5	690.6	703.1	713.3	726.7	737.5	749.9	758.7	758.7	758.7
	S.D.	64.9	68.1	72.5	73.8	77.2	85.1	85.7	88.6	91.9	94.0	97.5	97.5	97.5
03 DES 20	N	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	615.6	634.1	650.4	664.2	675.3	689.4	699.3	706.9	718.8	727.1	733.1	733.1	733.1
	S.D.	58.9	62.5	63.8	66.9	69.9	71.6	74.2	77.4	77.8	77.7	80.0	80.0	80.0

DES: Diethylstilbestrol

Table 2-1. -continued Body weight change of male animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth										Unit:g				
	182	189	196	203	210	217	224	231	238	245	252				
00 Control	N	25	25	25	25	25	25	25	25	25	25	25	25	25	25
	Mean	724.4	730.8	740.3	748.0	758.0	765.6	773.2	779.8	788.7	796.2	802.6	802.6	802.6	802.6
	S.D.	60.0	60.5	60.4	62.0	63.1	63.3	65.6	65.0	66.7	68.3	69.1	69.1	69.1	69.1
01 DES	N	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	725.2	729.9	739.5	746.1	754.3	761.1	768.4	775.9	783.0	789.8	794.9	794.9	794.9	794.9
	S.D.	66.4	68.2	69.0	70.0	72.5	74.2	75.6	77.4	78.5	79.6	82.2	82.2	82.2	82.2
02 DES	N	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	767.8	776.2	785.4	792.1	799.7	809.5	817.1	824.3	828.9	838.5	843.4	843.4	843.4	843.4
	S.D.	99.1	102.1	104.0	104.1	107.7	109.1	108.6	110.8	109.2	112.7	112.8	112.8	112.8	112.8
03 DES	N	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	Mean	742.1	749.5	760.1	767.5	776.3	785.3	792.4	799.0	804.1	808.1	827.5	827.5	827.5	827.5
	S.D.	81.4	82.0	84.7	85.1	86.2	88.2	87.7	89.7	95.9	110.5	84.6	84.6	84.6	84.6

DES: Diethylstilbestrol

Table 2-1. -continued Body weight change of male animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth										Unit:g				
	259	266	273	280	287	294	301	308	315	322	329				
00 Control	N	25	25	25	25	25	25	25	25	25	25	25	25	25	
	Mean	808.6	815.2	818.3	826.2	833.0	838.0	842.8	849.1	852.2	858.5	863.7	863.7	863.7	
	S.D.	71.0	71.7	73.7	74.9	76.9	77.3	79.2	79.7	80.4	81.4	81.9	81.9	81.9	
01 DES	N	22	22	22	22	22	22	22	22	22	22	22	22	22	
	Mean	803.1	808.1	810.1	816.4	821.9	826.7	831.9	838.8	842.4	845.9	850.3	850.3	850.3	
	S.D.	83.9	85.1	88.0	91.7	93.2	97.1	97.1	100.1	101.7	105.7	110.6	110.6	110.6	
02 DES	N	22	22	22	22	22	22	22	22	22	22	22	22	22	
	Mean	848.7	854.7	856.9	859.7	863.9	867.5	871.6	879.6	877.1	883.8	885.4	885.4	885.4	
	S.D.	114.0	115.1	118.0	116.6	116.8	118.0	117.6	118.8	119.0	121.4	118.5	118.5	118.5	
03 DES	N	21	21	21	21	20	20	20	20	20	20	20	20	19	
	Mean	834.4	839.8	842.4	850.2	852.4	857.0	860.4	863.1	866.8	872.9	869.2	869.2	869.2	
	S.D.	87.2	89.9	89.7	92.1	95.9	98.9	98.6	101.3	101.3	101.5	94.9	94.9	94.9	

DES: Diethylstilbestrol

Table 2-1. -continued Body weight change of male animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	336		343		Days after birth	Unit:g
	N	Mean S.D.	N	Mean S.D.		
00 Control	25	869.5 81.4	25	873.8 81.6	25	
01 DES	21	849.4 111.1	21	853.6 111.5	21	
02 DES	21	886.2 120.3	21	893.3 121.4	21	
03 DES	19	871.1 95.9	19	879.0 95.8	19	

DES: Diethylstilbestrol

Table 2-2. Body weight change of female animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth										Unit:g				
	28	35	42	49	56	63	70	77	84	91	98				
00 Control	N	55	55	55	55	55	55	55	55	55	55	55	55	50	36
	Mean	98.8	146.8	182.4	207.1	228.8	248.3	263.9	276.2	287.3	296.2	306.5	306.5	296.2	306.5
	S.D.	7.5	11.0	13.6	15.8	18.6	22.1	22.8	25.0	26.0	25.9	27.2	27.2	25.9	27.2
01 DES	N	52	52	52	52	52	52	52	52	52	52	52	52	50	35
	Mean	99.1	144.9	180.3	207.0	230.9	250.5	267.5	283.8	293.7	301.5	310.4	310.4	301.5	310.4
	S.D.	8.2	11.3	15.4	19.6	24.4	28.3	32.2	34.3	35.9	38.7	38.7	38.7	38.7	38.7
02 DES	N	53	53	53	53	53	53	53	53	53	53	53	53	48	35
	Mean	99.4	145.8	181.1	208.1	234.4	255.6	273.7	287.1	298.1	305.9	314.5	314.5	305.9	314.5
	S.D.	10.0	13.8	16.6	19.1	23.3	26.6	28.8	30.0	30.9	34.0	36.2	36.2	34.0	36.2
03 DES	N	47	47	47	47	47	47	47	47	47	47	47	47	41	30
	Mean	98.6	143.2	177.8	205.1	230.8	251.5	267.8	281.8	290.8	298.5	305.7	305.7	298.5	305.7
	S.D.	9.9	11.9	13.8	16.9	19.8	23.0	24.1	25.7	28.1	30.0	32.3	32.3	30.0	32.3

DES: Diethylstilbestrol

Table 2-2. -continued Body weight change of female animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth										Unit:g			
	105	112	119	126	133	140	147	154	161	168	175			
00 Control 0	N	36	36	36	36	36	36	36	36	36	36	36	36	36
	Mean	313.3	320.0	325.8	330.4	336.6	338.5	342.2	347.2	352.0	355.1	359.1	36	36
	S.D.	26.3	26.1	25.9	24.7	25.7	25.5	26.2	26.7	28.3	29.0	28.8	28.3	28.8
01 DES 0.2	N	35	35	35	35	35	35	35	35	35	35	35	35	35
	Mean	318.2	323.0	329.1	332.4	338.9	341.4	343.9	347.0	352.1	357.5	359.1	35	35
	S.D.	40.5	41.5	41.9	42.7	43.9	44.3	46.1	47.9	47.9	50.8	51.3	47.9	51.3
02 DES 2	N	35	35	35	35	35	35	35	35	35	35	35	35	35
	Mean	321.3	326.6	331.7	337.4	341.8	347.1	350.1	353.8	359.5	363.1	365.8	35	35
	S.D.	35.8	36.1	35.8	36.7	36.8	37.5	39.7	40.2	41.5	43.2	43.5	41.5	43.5
03 DES 20	N	30	30	30	30	30	30	30	30	30	30	30	30	30
	Mean	312.2	318.7	325.8	329.7	333.7	336.1	339.9	343.7	346.6	351.2	354.5	30	30
	S.D.	34.0	35.0	35.5	35.4	37.5	38.4	38.7	38.6	40.7	40.3	41.2	40.7	41.2

DES: Diethylstilbestrol



Table 2-2. -continued Body weight change of female animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth										Unit:g					
	182	189	196	203	210	217	224	231	238	245	252					
00 Control	N	36	36	36	36	20	20	20	20	20	20	20	20	20	20	20
	Mean	362.2	364.9	367.0	367.5	367.8	371.7	375.6	377.5	382.2	379.7					
	S.D.	29.1	29.6	29.7	30.3	33.5	35.3	35.7	34.1	34.5	39.0					
01 DES	N	35	35	35	35	19	19	19	19	19	19	19	19	19	19	19
	Mean	362.6	365.0	367.8	370.3	372.2	373.9	378.9	383.0	386.5	391.7	396.4				
	S.D.	51.3	52.6	54.5	56.7	51.9	51.7	53.3	53.9	55.6	56.8	58.0				
02 DES	N	35	35	35	33	20	20	20	20	20	20	20	20	20	20	20
	Mean	369.3	372.8	376.3	373.3	366.3	372.1	374.0	379.0	387.1	392.4	396.3				
	S.D.	44.7	45.2	46.8	44.0	41.9	42.9	44.8	46.8	47.9	50.0	50.1				
03 DES	N	30	30	30	30	18	18	18	18	18	18	18	18	18	18	18
	Mean	357.0	358.5	359.0	360.8	365.9	366.5	368.5	373.9	377.6	379.5	384.0				
	S.D.	43.3	43.2	44.7	44.3	46.7	48.4	48.5	50.0	51.6	53.0	53.4				

DES: Diethylstilbestrol

Table 2-2. -continued Body weight change of female animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth										Unit:g			
	259	266	273	280	287	294	301	308	315	322	329			
00 Control 0	N	19	19	19	19	19	19	19	19	19	19	19	19	19
	Mean	389.5	393.2	395.4	400.7	402.6	406.2	410.8	416.6	421.7	425.2	429.1	429.1	429.1
	S.D.	40.8	40.6	39.9	37.8	41.4	43.7	43.9	47.0	49.5	49.5	51.2	51.2	51.2
01 DES 0.2	N	19	19	19	19	19	19	19	19	19	19	19	19	19
	Mean	400.2	403.5	404.8	409.0	413.3	417.2	423.0	426.3	429.8	432.7	440.4	440.4	440.4
	S.D.	59.9	58.4	60.7	61.3	60.5	63.2	64.9	62.8	64.6	67.4	66.3	66.3	66.3
02 DES 2	N	20	20	20	20	20	20	20	20	20	20	20	20	20
	Mean	397.8	401.3	402.9	406.0	407.0	408.2	412.5	416.6	432.0	436.8	442.3	442.3	442.3
	S.D.	51.9	53.7	58.6	59.3	61.3	72.5	82.2	83.9	69.4	71.3	74.8	74.8	74.8
03 DES 20	N	18	18	18	18	18	18	18	18	18	18	18	18	18
	Mean	389.8	392.3	394.0	396.9	401.9	405.8	410.1	414.8	417.8	421.8	427.0	427.0	427.0
	S.D.	54.0	54.9	56.3	58.4	59.4	58.9	60.5	62.2	62.3	65.1	68.7	68.7	68.7

DES: Diethylstilbestrol

Table 2-2. -continued Body weight change of female animals(F1) during growth period

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Days after birth		Unit:g
	336	343	
00 Control	N	19	19
	Mean S.D.	432.2 51.6	435.5 52.0
01 DES 0.2	N	19	19
	Mean S.D.	442.7 64.4	448.2 65.9
02 DES 2	N	19	19
	Mean S.D.	445.0 77.0	447.8 81.2
03 DES 20	N	18	18
	Mean S.D.	430.5 68.8	435.4 70.2

DES: Diethylstilbestrol

Table 3-1. External differentiations of male offspring(F1) during growth period  
 --- Preputial separation ---

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Preputial separation					(Unit:%)
	21	22	23	24	25	
00 control	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	10 0.0
01 DES 0.2	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	10 0.0
02 DES 2	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	10 0.0
03 DES 20	N 9 Mean 0.0	N 9 Mean 0.0	N 9 Mean 0.0	N 9 Mean 0.0	N 9 Mean 0.0	9 0.0

DES: Diethylstilbestrol

Table 3-1. -continued External differentiations of male offspring(F1) during growth period  
 --- Preputial separation ---

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Preputial separation					(Unit:%)
	26	27	28	29	30	
00 control	N 10 Mean 0.0	10 0.0	10 0.0	10 0.0	10 0.0	10 0.0
01 DES	N 10 Mean 0.0	10 0.0	10 0.0	10 0.0	10 0.0	10 0.0
02 DES	N 10 Mean 0.0	10 0.0	10 0.0	10 0.0	10 0.0	10 0.0
03 DES	N 9 Mean 0.0	9 0.0	9 0.0	9 0.0	9 0.0	9 0.0

DES: Diethylstilbestrol

Table 3-1. -continued External differentiations of male offspring(F1) during growth period  
 --- Preputial separation ---

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Preputial separation					(Unit:%)
	31	32	33	34	35	
00 control	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 27.5	N 10 Mean 39.0	N 10 Mean 77.5	
01 DES 0.2	N 10 Mean 15.0	N 10 Mean 15.0	N 10 Mean 37.5	N 10 Mean 65.0	N 10 Mean 70.0	
02 DES 2	N 10 Mean 3.3	N 10 Mean 8.3	N 10 Mean 16.7	N 10 Mean 26.7	N 10 Mean 48.3	
03 DES 20	N 9 Mean 0.0	N 9 Mean 0.0	N 9 Mean 8.3	N 9 Mean 30.6	N 9 Mean 63.9	

DES: Diethylstilbestrol

Table 3-1. -continued External differentiations of male offspring(F1) during growth period  
 --- Preputial separation ---

Exp.No. A411 (079-399)

Group-No. Dose ng/kg	Preputial separation				(Unit:%)
	36	37	38	39	
00 control	N Mean 10 92.5	10 97.5	10 97.5	10 97.5	10 97.5
01 DES	N Mean 10 85.0	10 95.0	10 95.0	10 95.0	10 95.0
02 DES	N Mean 10 75.0	10 95.0	10 95.0	10 95.0	10 95.0
03 DES	N Mean 9 88.9	9 94.4	9 94.4	9 94.4	9 94.4

DES: Diethylstilbestrol

Table 3-1. -continued External differentiations of male offspring(F1) during growth period  
 --- Preputial separation ---

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Preputial separation		(Unit:%)
	41	42	
00 control	N Mean 100.0	N Mean 100.0	10 100.0
01 DES 0.2	N Mean 100.0	N Mean 100.0	10 100.0
02 DES 2	N Mean 95.0	N Mean 100.0	10 100.0
03 DES 20	N Mean 100.0	N Mean 100.0	9 100.0

DES: Diethylstilbestrol



Table 3-2. External differentiations of female offspring(F1) during growth period  
 --- Opening of vagina ---

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Opening of vagina					(Unit:%)
	21	22	23	24	25	
00 control	N 10 Mean 0.0	10 0.0	10 0.0	10 0.0	10 0.0	
01 DES 0.2	N 10 Mean 0.0	10 0.0	10 0.0	10 0.0	10 0.0	
02 DES 2	N 10 Mean 0.0	10 0.0	10 0.0	10 0.0	10 0.0	
03 DES 20	N 9 Mean 0.0	9 0.0	9 0.0	9 0.0	9 0.0	

DES: Diethylstilbestrol

Table 3-2. -continued External differentiations of female offspring(F1) during growth period  
 --- Opening of vagina ---

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Opening of vagina					(Unit:%)
	26	27	28	29	30	
00 control	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	10 0.0
01 DES 0.2	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	10 0.0
02 DES 2	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	N 10 Mean 0.0	10 0.0
03 DES 20	N 9 Mean 0.0	N 9 Mean 0.0	N 9 Mean 0.0	N 9 Mean 0.0	N 9 Mean 0.0	9 0.0

DES: Diethylstilbestrol

Table 3-2. -continued External differentiations of female offspring(F1) during growth period  
 --- Opening of vagina ---

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Opening of vagina				(Unit:%)
	36	37	38	39	
00 control	N 10 Mean 59.2	N 10 Mean 70.8	N 10 Mean 89.2	N 10 Mean 93.3	N 10 Mean 96.7
01 DES	N 10 Mean 45.0	N 10 Mean 71.7	N 10 Mean 83.3	N 10 Mean 88.3	N 10 Mean 95.0
02 DES	N 10 Mean 67.3	N 10 Mean 81.0	N 10 Mean 83.0	N 10 Mean 90.0	N 10 Mean 90.0
03 DES	N 9 Mean 72.2	N 9 Mean 83.3	N 9 Mean 95.4	N 9 Mean 97.2	N 9 Mean 97.2

DES: Diethylstilbestrol

Table 3-2. -continued External differentiations of female offspring(F1) during growth period  
 --- Opening of vagina ---

Exp.No. A411(079-399)

Group-No. Dose ng/kg	Opening of vagina					(Unit:%)
	31	32	33	34	35	
00 control 0	N	10	10	10	10	10
	Mean	3.3	6.7	20.0	31.7	45.8
01 DES 0.2	N	10	10	10	10	10
	Mean	1.7	10.0	18.3	23.3	36.7
02 DES 2	N	10	10	10	10	10
	Mean	5.0	6.7	17.3	27.3	46.7
03 DES 20	N	9	9	9	9	9
	Mean	10.2	14.8	25.9	34.3	55.6

DES: Diethylstilbestrol