

PA06: Organ Weights Summary

Study Number: I99067
 DTTID: 103-002-003-000-9
 Study Type: immune screening
 Species/Strain: Rat/Harlan Sprague Dawley

Test Compound: Echinacea purpurea extract
 CAS Number: 90028-20-9
 DTXSID: DTXSID0031265

Date: 06 Jun 2025
 Time: 11:01:00 AM

Females: SRBC

	Treatment Groups						
	0 mg/kg	125 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg	2000 mg/kg	15 mg/kg CPS
Body Weight							
Terminal Body Weight (g)	243.6 ± 3.1[11]	250.8 ± 6.2[12]	240.9 ± 3.8[12]	251.0 ± 4.1[12]	246.6 ± 5.1[12]	247.1 ± 4.8[12]	245.4 ± 7.1[8]
Spleen							
Absolute (g)	0.544 ± 0.015[12]	0.573 ± 0.027[12]	0.570 ± 0.021[12]	0.580 ± 0.017[12]	0.566 ± 0.019[12]	0.608 ± 0.023[12]	0.413 ± 0.020[8]**
Relative (mg/g)	2.24 ± 0.05[11]*	2.28 ± 0.07[12]	2.37 ± 0.08[12]	2.31 ± 0.06[12]	2.30 ± 0.08[12]	2.46 ± 0.08[12]	1.69 ± 0.07[8]**
Thymus							
Absolute (g)	0.284 ± 0.016[12]	0.299 ± 0.027[12]	0.292 ± 0.016[12]	0.314 ± 0.016[12]	0.300 ± 0.017[12]	0.328 ± 0.016[12]	0.147 ± 0.016[8]**
Relative (mg/g)	1.14 ± 0.06[11]	1.18 ± 0.08[12]	1.21 ± 0.06[12]	1.25 ± 0.06[12]	1.22 ± 0.06[12]	1.33 ± 0.08[12]	0.60 ± 0.06[8]**

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Females: NK/Pheno

	Treatment Groups						
	0 mg/kg	125 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg	2000 mg/kg	15 mg/kg CPS
Body Weight							
Terminal Body Weight (g)	236.3 ± 4.9[12]	247.8 ± 4.1[12]	247.2 ± 3.0[12]	246.3 ± 3.4[12]	245.3 ± 5.2[12]	249.8 ± 4.0[12]	235.8 ± 3.6[8]
Spleen							
Absolute (g)	0.583 ± 0.026[12]	0.581 ± 0.027[12]	0.570 ± 0.018[12]	0.564 ± 0.030[12]	0.549 ± 0.015[12]	0.552 ± 0.023[12]	0.454 ± 0.033[8]**
Relative (mg/g)	2.46 ± 0.09[12]	2.35 ± 0.10[12]	2.30 ± 0.05[12]	2.29 ± 0.13[12]	2.26 ± 0.09[12]	2.21 ± 0.08[12]	1.92 ± 0.12[8]**
Thymus							
Absolute (g)	0.314 ± 0.020[12]	0.323 ± 0.011[12]	0.359 ± 0.031[12]	0.337 ± 0.019[12]	0.358 ± 0.019[12]	0.318 ± 0.019[12]	0.180 ± 0.011[8]**
Relative (mg/g)	1.33 ± 0.08[12]	1.31 ± 0.04[12]	1.44 ± 0.11[12]	1.37 ± 0.07[12]	1.46 ± 0.09[12]	1.27 ± 0.08[12]	0.76 ± 0.04[8]**

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Females: KLH

	Treatment Groups						
	0 mg/kg	125 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg	2000 mg/kg	15 mg/kg CPS
Body Weight							
Terminal Body Weight (g)	240.9 ± 4.2[12]	234.2 ± 4.3[12]	238.5 ± 3.2[11]	239.3 ± 3.0[12]	241.4 ± 4.9[12]	234.6 ± 2.9[12]	215.0 ± 2.0[8]**
Spleen							
Absolute (g)	0.609 ± 0.022[12]	0.567 ± 0.021[12]	0.561 ± 0.021[11]	0.552 ± 0.021[12]	0.573 ± 0.023[12]	0.546 ± 0.009[12]	0.300 ± 0.015[8]**
Relative (mg/g)	2.53 ± 0.08[12]	2.42 ± 0.07[12]	2.35 ± 0.07[11]	2.30 ± 0.07[12]	2.37 ± 0.06[12]	2.33 ± 0.04[12]	1.40 ± 0.07[8]**
Thymus							
Absolute (g)	0.333 ± 0.016[12]	0.303 ± 0.014[12]	0.367 ± 0.023[11]	0.371 ± 0.022[12]	0.327 ± 0.013[12]	0.352 ± 0.011[12]	0.123 ± 0.011[8]**
Relative (mg/g)	1.39 ± 0.07[12]	1.29 ± 0.05[12]	1.53 ± 0.09[11]	1.55 ± 0.09[12]	1.36 ± 0.06[12]	1.50 ± 0.04[12]	0.57 ± 0.05[8]**

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Females: CTL

	Treatment Groups						
	0 mg/kg	125 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg	2000 mg/kg	15 mg/kg CPS
Body Weight							
Terminal Body Weight (g)	228.4 ± 4.0[11]	236.1 ± 3.7[11]	238.8 ± 3.9[12]	240.8 ± 3.3[12]	235.3 ± 3.8[12]	235.1 ± 3.7[12]	226.8 ± 3.2[8]
Lung							
Absolute (g)	1.60 ± 0.04[12]	1.69 ± 0.07[11]	1.63 ± 0.06[12]	1.59 ± 0.05[12]	1.58 ± 0.05[12]	1.69 ± 0.05[12]	1.75 ± 0.07[8]
Relative (mg/g)	6.92 ± 0.20[11]	7.18 ± 0.33[11]	6.85 ± 0.26[12]	6.59 ± 0.19[12]	6.72 ± 0.21[12]	7.19 ± 0.23[12]	7.70 ± 0.25[8]*
Spleen							
Absolute (g)	0.431 ± 0.037[12]	0.591 ± 0.012[11]**	0.560 ± 0.017[12]**	0.531 ± 0.015[12]**	0.551 ± 0.011[12]**	0.564 ± 0.013[12]**	0.318 ± 0.013[8]*
Relative (mg/g)	1.84 ± 0.18[11]	2.51 ± 0.07[11]**	2.35 ± 0.08[12]**	2.21 ± 0.06[12]*	2.34 ± 0.04[12]**	2.40 ± 0.05[12]**	1.40 ± 0.05[8]
Thymus							
Absolute (g)	0.431 ± 0.037[12]*	0.324 ± 0.012[11]**	0.328 ± 0.016[12]**	0.338 ± 0.020[11]*	0.311 ± 0.017[12]**	0.314 ± 0.016[12]**	0.106 ± 0.014[8]**
Relative (mg/g)	1.90 ± 0.16[11]*	1.37 ± 0.05[11]**	1.38 ± 0.07[12]**	1.40 ± 0.08[11]**	1.31 ± 0.06[12]**	1.34 ± 0.07[12]**	0.47 ± 0.06[8]**

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Females: Immunopath

	Treatment Groups						
	0 mg/kg	125 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg	2000 mg/kg	15 mg/kg CPS
Body Weight							
Terminal Body Weight (g)	236.3 ± 3.8[12]	238.4 ± 5.0[12]	243.6 ± 3.6[12]	237.7 ± 5.4[11]	240.0 ± 3.1[12]	239.8 ± 4.4[12]	235.3 ± 3.1[8]
Adrenal Gland, Right							
Absolute (g)	0.0356 ± 0.0008[12]	0.0315 ± 0.0013[12]	0.0356 ± 0.0012[12]	0.0322 ± 0.0012[11]	0.0352 ± 0.0011[12]	0.0345 ± 0.0014[12]	0.0340 ± 0.0019[8]
Relative (mg/g)	0.15 ± 0.00[12]	0.13 ± 0.01[12]*	0.15 ± 0.00[12]	0.14 ± 0.00[11]	0.15 ± 0.00[12]	0.14 ± 0.01[12]	0.14 ± 0.01[8]
Kidney, Right							
Absolute (g)	0.82 ± 0.02[12]	0.79 ± 0.02[12]	0.80 ± 0.02[12]	0.81 ± 0.03[11]	0.84 ± 0.02[12]	0.82 ± 0.02[12]	0.83 ± 0.02[8]
Relative (mg/g)	3.46 ± 0.06[12]	3.33 ± 0.05[12]	3.29 ± 0.06[12]	3.41 ± 0.06[11]	3.51 ± 0.05[12]	3.44 ± 0.09[12]	3.52 ± 0.06[8]
Liver							
Absolute (g)	8.71 ± 0.23[12]	8.64 ± 0.27[12]	8.57 ± 0.21[12]	8.64 ± 0.25[11]	9.18 ± 0.18[12]	9.14 ± 0.26[12]	8.50 ± 0.32[8]
Relative (mg/g)	36.86 ± 0.77[12]	36.21 ± 0.73[12]	35.25 ± 0.85[12]	36.37 ± 0.88[11]	38.26 ± 0.56[12]	38.21 ± 1.20[12]	36.08 ± 0.95[8]
Lung							
Absolute (g)	1.86 ± 0.07[12]	1.82 ± 0.05[12]	1.80 ± 0.04[12]	1.88 ± 0.05[11]	1.89 ± 0.06[12]	1.90 ± 0.08[12]	1.85 ± 0.06[8]
Relative (mg/g)	7.86 ± 0.26[12]	7.64 ± 0.15[12]	7.39 ± 0.16[12]	7.94 ± 0.25[11]	7.86 ± 0.20[12]	7.93 ± 0.34[12]	7.86 ± 0.22[8]
Spleen							
Absolute (g)	0.577 ± 0.029[12]	0.545 ± 0.018[12]	0.568 ± 0.013[12]	0.564 ± 0.012[11]	0.573 ± 0.016[12]	0.558 ± 0.016[12]	0.420 ± 0.015[8]**
Relative (mg/g)	2.44 ± 0.10[12]	2.29 ± 0.05[12]	2.33 ± 0.05[12]	2.38 ± 0.07[11]	2.39 ± 0.05[12]	2.33 ± 0.07[12]	1.78 ± 0.06[8]**
Thymus							
Absolute (g)	0.336 ± 0.015[12]	0.296 ± 0.018[12]	0.336 ± 0.011[12]	0.327 ± 0.015[11]	0.318 ± 0.015[12]	0.315 ± 0.014[12]	0.166 ± 0.017[8]**
Relative (mg/g)	1.42 ± 0.06[12]	1.24 ± 0.07[12]	1.38 ± 0.04[12]	1.39 ± 0.07[11]	1.32 ± 0.06[12]	1.32 ± 0.06[12]	0.70 ± 0.07[8]**

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LEGEND

Data are displayed as mean \pm SEM (N) unless otherwise noted.

Relative organ weights (organ-weight-to-body-weight ratios) are given as mg organ weight/g body weight.

Statistical analysis performed by Jonckheere (trend) and Williams or Dunnett (pairwise) tests. The positive control group (15 mg/kg CPS) was excluded from trend test.

Statistical analysis for the positive control group (15 mg/kg CPS) compared to the vehicle control group was performed using the t-test.

Statistical significance for the control group indicates a significant trend test.

Statistical significance for a treatment group indicates a significant pairwise test compared to the vehicle control group.

* Statistically significant at $p \leq 0.05$

** Statistically significant at $p \leq 0.01$

SEM = Standard Error of the Mean

SD = Study Day

SRBC = Sheep Red Blood Cells; NK = Natural Killer; KLH = Keyhole Limpet Hemocyanin; CTL = Cytotoxic T Lymphocytes

CPS = Cyclophosphamide

Females from the vehicle control and treatment groups were removed on SD 28.

** END OF REPORT **