Supplementary Table S1. Group summaries and comparisons with saline and with loperamide for each antidiarrheal endpoint and preparation

Group	n	Mean ± SEM	Mean difference vs saline (95% CI)	Adj. P vs saline	Mean difference vs loperamide (95% CI)	Adj. P vs loperamide
Total fecal pellet number (wet and dry) — hydroalcoholic extract; one-way ANOVA, F(4, 45) = 43.76						
Saline	10	13.50 ± 0.96	Reference	Reference	11.10 (8.061, 14.14)	<0.001
Loperamide (3 mg/kg)	10	2.40 ± 0.45	−11.10 (−14.14, −8.061)	<0.001	Reference	Reference
Extract 100 mg/kg	10	8.60 ± 0.81	−4.90 (−7.939, −1.861)	<0.001	6.20 (3.161, 9.239)	<0.001
Extract 200 mg/kg	10	5.80 ± 0.76	−7.70 (−10.74, −4.661)	<0.001	3.40 (0.3606, 6.439)	0.019
Extract 300 mg/kg	10	1.80 ± 0.55	−11.70 (−14.74, −8.661)	<0.001	−0.60 (−3.639, 2.439)	>0.999
Latency to first diarrheal stool (min) — hydroalcoholic extract; one-way ANOVA, F(4, 45) = 147.9						
Saline	10	56.58 ± 3.29	Reference	Reference	−127.62 (−147.4, −107.9)	<0.000001
Loperamide (3 mg/kg)	10	184.20 ± 3.23	127.62 (107.9, 147.4)	<0.000001	Reference	Reference
Extract 100 mg/kg	10	92.40 ± 4.96	35.82 (16.11, 55.53)	0.000027	−91.80 (−111.5, −72.12)	<0.000001
Extract 200 mg/kg	10	147.90 ± 5.56	91.32 (71.63, 111.1)	<0.000001	−36.30 (−56.02, −16.60)	0.000021
Extract 300 mg/kg	10	186.40 ± 5.87	129.82 (110.1, 149.6)	<0.000001	2.20 (−17.50, 21.92)	>0.999999
Wet fecal number — hydroalcoholic extract; one-way ANOVA, F(4, 45) = 135.2						
Saline	10	8.00 ± 0.39	Reference	Reference	7.40 (6.23, 8.56)	<0.000001
Loperamide (3 mg/kg)	10	0.60 ± 0.22	−7.40 (−8.56, −6.23)	<0.000001	Reference	Reference
Extract 100 mg/kg	10	4.70 ± 0.30	−3.30 (−4.46, −2.13)	<0.000001	4.10 (2.93, 5.26)	<0.000001
Extract 200 mg/kg	10	1.70 ± 0.26	−6.30 (−7.46, −5.13)	<0.000001	1.10 (−0.064, 2.26)	0.077226
Extract 300 mg/kg	10	0.40 ± 0.16	−7.60 (−8.764, −6.43)	<0.000001	−0.20 (−1.364, 0.96)	>0.999999
Wet fecal weight (mg) — hydroalcoholic extract; one-way ANOVA, F(4, 45) = 776.3						
Saline	10	413.0 ± 6.72	Reference	Reference	376.9 (353.0, 403.3)	<0.000001
Loperamide (3 mg/kg)	10	36.1 ± 1.66	−376.9 (−403.3, −353.0)	<0.000001	Reference	Reference
Extract 100 mg/kg	10	261.5 ± 7.78	−151.5 (−177.9, −126.7)	<0.000001	225.4 (199.8, 251.0)	<0.000001
Extract 200 mg/kg	10	59.8 ± 6.24	−353.2 (−379.6, −328.4)	<0.000001	23.7 (−1.944, 49.34)	0.090494
Extract 300 mg/kg	10	29.4 ± 6.43	−383.6 (−410.0, −358.8)	<0.000001	−6.7 (−32.34, 18.94)	>0.999999
Total fecal pellet number (wet and dry) — alkaloid fraction; one-way ANOVA, F(4, 45) = 51.02						
Saline	10	13.50 ± 0.96	Reference	Reference	11.10 (8.214, 13.99)	<0.000001
Loperamide (3 mg/kg)	10	2.40 ± 0.45	−11.10 (−13.99, −8.214)	<0.000001	Reference	Reference
Alkaloid fraction 5 mg/kg	10	6.10 ± 0.90	−7.40 (−10.29, −4.514)	<0.000001	3.70 (0.8143, 6.586)	0.004521
Alkaloid fraction 10 mg/kg	10	3.20 ± 0.53	−10.30 (−13.19, −7.414)	<0.000001	0.80 (−2.086, 3.686)	>0.999999
Alkaloid fraction 20 mg/kg	10	1.20 ± 0.42	−12.30 (−15.19, −9.414)	<0.000001	−1.20 (−4.086, 1.686)	>0.999999
Latency to first diarrheal stool (min) — alkaloid fraction; one-way ANOVA, F(4, 45) = 79.4						
Saline	10	56.58 ± 3.29	Reference	Reference	−127.62 (−156.2, −99.12)	<0.000001
Loperamide (3 mg/kg)	10	184.20 ± 3.24	127.62 (99.12, 156.2)	<0.000001	Reference	Reference
Alkaloid fraction 5 mg/kg	10	111.80 ± 11.56	55.22 (26.70, 83.76)	0.000008	−72.40 (−101.0, −43.89)	<0.000001
Alkaloid fraction 10 mg/kg	10	164.00 ± 5.90	107.42 (78.84, 135.9)	<0.000001	−20.20 (−48.81, 8.253)	0.415310
Alkaloid fraction 20 mg/kg	10	208.30 ± 6.61	151.72 (123.1, 180.2)	<0.000001	24.10 (−4.503, 52.56)	0.166903
Wet fecal weight (mg) — alkaloid fraction; one-way ANOVA, F(4, 45) = 750.2						
Saline	10	413.0 ± 6.72	Reference	Reference	376.9 (352.2, 403.2)	<0.000001
Loperamide (3 mg/kg)	10	36.1 ± 1.66	−376.9 (−403.2, −352.2)	<0.000001	Reference	Reference
Alkaloid fraction 5 mg/kg	10	151.5 ± 9.45	−261.5 (−287.8, −236.8)	<0.000001	115.4 (89.94, 140.9)	<0.000001
Alkaloid fraction 10 mg/kg	10	38.6 ± 5.60	−374.4 (−400.7, −349.7)	<0.000001	2.5 (−22.96, 27.96)	>0.999999
Alkaloid fraction 20 mg/kg	10	14.3 ± 4.16	−398.7 (−425.0, −374.0)	<0.000001	−21.8 (−47.26, 3.655)	0.150442
Total fecal pellet number (wet and dry) — matrine; one-way ANOVA, F(4, 45) = 54.3						
Saline	10	13.50 ± 0.96	Reference	Reference	11.10 (8.244, 13.96)	<0.000001
Loperamide (3 mg/kg)	10	2.40 ± 0.45	−11.10 (−13.96, −8.244)	<0.000001	Reference	Reference
Matrine 5 mg/kg	10	11.10 ± 0.80	−2.40 (−5.256, 0.4561)	0.169182	8.70 (5.844, 11.56)	<0.000001
Matrine 15 mg/kg	10	8.60 ± 0.62	−4.90 (−7.756, −2.044)	0.000074	6.20 (3.344, 9.056)	<0.000001
Matrine 30 mg/kg	10	2.40 ± 0.45	−11.10 (−13.96, −8.244)	<0.000001	0.00 (−2.856, 2.856)	>0.999999
Latency to first diarrheal stool (min) — matrine; one-way ANOVA, F(4, 45) = 86.17						
Saline	10	56.58 ± 3.29	Reference	Reference	−127.62 (−156.2, −99.12)	<0.000001
Loperamide (3 mg/kg)	10	184.20 ± 3.24	127.62 (99.12, 156.2)	<0.000001	Reference	Reference
Matrine 5 mg/kg	10	93.74 ± 9.53	37.16 (11.41, 62.91)	0.001030	−90.46 (−116.2, −64.74)	<0.000001

Group	n	Mean ± SEM	Mean difference vs saline (95% CI)	Adj. P vs saline	Mean difference vs loperamide (95% CI)	Adj. P vs loperamide
Matrine 15 mg/kg	10	144.10 ± 5.96	87.52 (61.77, 113.3)	<0.000001	−40.10 (−65.88, −14.38)	0.000344
Matrine 30 mg/kg	10	187.70 ± 6.53	131.12 (105.3, 156.8)	<0.000001	3.50 (−22.33, 29.17)	>0.999999
Wet fecal number — matrine; one-way ANOVA, F(4, 45) = 113.5						
Saline	10	8.00 ± 0.39	Reference	Reference	7.40 (6.140, 8.660)	<0.000001
Loperamide (3 mg/kg)	10	0.60 ± 0.22	−7.40 (−8.660, −6.140)	<0.000001	Reference	Reference
Matrine 5 mg/kg	10	6.30 ± 0.42	−1.70 (−2.960, −0.4398)	0.002464	5.70 (4.440, 6.960)	<0.000001
Matrine 15 mg/kg	10	3.10 ± 0.18	−4.90 (−6.160, −3.640)	<0.000001	2.50 (1.240, 3.760)	0.000005
Matrine 30 mg/kg	10	1.20 ± 0.20	−6.80 (−8.060, −5.540)	<0.000001	0.60 (−0.6602, 1.860)	>0.999999
Wet fecal weight (mg) — matrine; one-way ANOVA, F(4, 45) = 704.6						
Saline	10	413.0 ± 6.72	Reference	Reference	376.9 (352.2, 403.2)	<0.000001
Loperamide (3 mg/kg)	10	36.1 ± 1.66	−376.9 (−403.2, −352.2)	<0.000001	Reference	Reference
Matrine 5 mg/kg	10	203.2 ± 9.65	−209.8 (−236.1, −185.1)	<0.000001	167.1 (141.6, 192.6)	<0.000001
Matrine 15 mg/kg	10	71.2 ± 5.60	−341.8 (−368.1, −317.1)	<0.000001	35.1 (9.607, 60.59)	0.001907
Matrine 30 mg/kg	10	33.8 ± 3.75	−379.2 (−405.5, −354.5)	<0.000001	−2.3 (−27.79, 23.19)	>0.999999

Notes: n = 10 mice per group for every row (experimental unit: the individual animal); no observations were missing. Values are mean ± SEM. Each preparation was analyzed for each endpoint by a separate one-way ANOVA (five groups; df = 4, 45); the saline and loperamide groups were common controls, so the same control data appear in each analysis. Pairwise comparisons used Tukey's significant difference test; adjusted P values and 95% confidence intervals (CI) are Tukey-adjusted within each ANOVA and are not adjusted across preparations or endpoints. Mean differences are group minus reference group (saline in the "vs saline" columns, loperamide in the "vs loperamide" columns), in the units of the endpoint (min for latency, mg for wet fecal weight, counts otherwise); negative values indicate lower values than the reference, and for latency a positive difference indicates a delay. Standardized effect sizes were not calculated; the mean difference with its 95% CI is the effect-size measure. Adjusted P values are given as exported from the analysis (<0.000001 and >0.999999; the analysis of total fecal pellet number for the extract was exported to three decimals, <0.001 and >0.999).