Table S3: Compounds identified in different types of fresh dung. Compounds are listed as percentage.

Compound	cow	deer	fox	horse	sheep	wild boar	time (min)	RI	Literature-RI	authentic standard	MS attached	Literature
methyl-butric acid*	-	-	-	-	-	13.4	3.81	911	-	-	x	-
pentanoic acid	-	1.29	-	-	-	-	4.25	927	926	x		Jezussek, M.; Juliano, B.O.; Schieberle, P., Comparison of key aroma compounds in cooked brown rice varieties based on aroma extract dilution analysis, J. Agric. Food Chem., 2002, 50, 5, 1101-1105.
unknown 1	-	-	-	1.79	-	-	4.43	934	-	-	x	-
3,7-dimethyl-octa-1,6-diene (beta-citronellene)	-	-	-	3.43	-	-	4.79	947	947	-		Buchin, S.; Salmon, J.-C.; Carnat, A.-P.; Berger, T.; Bugaud, C.; Bosset, J.O., Identification de composés monoterpéniques, sesquiterpéniques et benzéniques dans un lait d'alpage très riche en ces substances, Mitt. Lebensmittelunters. Hyg., 2002, 93, 199-216.
hexanoic acid	-	-	-	-	-	12.06	5.01	955	956	x		Pino, J.A.; Marbot, R., Volatile flavor constituents of acerola (Malpighia emarginata DC.) fruit, J. Agric. Food Chem., 2001, 49, 12, 5880-5882.
benzaldehyde	-	1.64	3.07	-	2.75	-	5.69	980	978	x		Rout, P.K.; Rao, Y.R.; Sree., A.; Naik, S.N., Composition of essential oil, concrete, absolute, wax and headspace volatiles of Murraya paniculata (Linn.) Jack flowers, Flavour Fragr. J., 2007, 22, 5, 352-357.
methyl-heptane	-	-	-	2.12	-	0.76	5.80	985	-	-	x	-
2-octen-1-ol	-	1.7	1.79	-	-	0.69	5.99	992	-	-		-
6-methyl-5-heptene-2-one	-	6.24	-	5.97	4.37	-	6.09	995	-	-		-
decane	-	6.81	-	-	-	2.06	6.18	999	1000	x		-
2-octanone	-	-	-	-	11.14	-	6.19	999	999	-		Moio, L.; Piombino, P.; Addeo, F., Odour-impact compounds of Gorgonzola cheese, J. Dairy Res., 2000, 67, 2, 273-285.
phenole	8.74	-	26.05	-	-	-	6.30	1004	1004	x		Mjøs, S.A.; Meier, S.; Boitsov, S., Alkylphenol retention indices, J. Chromatogr. A, 2006, 1123, 1, 98-105.
octanal	-	-	-	-	1.84	0.53	6.55	1015	1015	-		Bredie, W.L.P.; Mottram, D.S.; Guy, R.C.E., Effect of temperature and pH on the generation of flavor volatiles in extrusion cooking of wheat flour, J. Agric. Food Chem., 2002, 50, 5, 1118-1125.
unknown 2	-	-	-	1.04	-	-	6.63	1018	-	-	x	-
cyclohexanemethanol*§	0.4	-	-	-	-	-	6.72	1022	-	-	x	-
dipropyl disulfide*	0.22	1.15	0.46	1.82	-	-	6.81	1026	-	-		-
limonene	-	2.28	-	0.66	-	0.41	6.99	1034	1034	x		Moreira, D.L.; Sousa, P.O.; Pereira, N.A.; Cardoso, G.L., Effect of leaf essential oil from Piper solmsianum C.DC. in mice behaviour, An. Acad. Bras. Cienc., 2001, 73, 1, 1-7.
unknown 3	-	2.26	-	-	-	-	7.12	1040	-	-	x	-
monoterpene 1	-	1.86	-	-	-	-	7.68	1065	-	-	x	-
isophorone	-	-	-	-	0.65	-	7.83	1072	1074	-		Rowland, C.Y.; Blackman, A.J.; D'Arcy, B.R.; Rintoul, G.B., Comparison of organic extractives found in leatherwood (Eucryphia lucida) honey and leatherwood flowers and leaves, J. Agric. Food Chem., 1995, 43, 3, 753-763.
methyl cyclohexanoate*§	0.73	-	-	-	-	-	7.88	1074	-	-		-
unknown 4	-	-	-	1.04	-	-	8.00	1079	-	-	x	-
acetophenone	-	4.49	-	-	5.89	-	8.13	1085	1096	x		Varlet V.; Knockaert C.; Prost C.; Serot T., Comparison of odor-active volatile compounds of fresh and smoked salmon, J. Agric. Food Chem., 2006, 54, 9, 3391-3401.
monoterpene 2	-	-	-	-	1.1	-	8.27	1091	-	-	x	-
p-cresol	31.68	47.28	22.68	49.96	60.64	65.2	8.44	1099	1100	x		Czerny, M.; Brueckner, R.; Kirchoff, E.; Schmitt, R.; Buettner, A., The influence of molecular structure on odor qualities and odor detection thresholds of volatile alkylated phenols, Chem. Senses, 2011, 1-15
unknown 5	-	0.71	-	-	0.62	-	8.71	1112	-	-	x	-
nonanal	-	3.19	0.59	21.12	2.28	1.42	8.80	1117	1118	-		Bredie, W.L.P.; Mottram, D.S.; Guy, R.C.E., Effect of temperature and pH on the generation of flavor volatiles in extrusion cooking of wheat flour, J. Agric. Food Chem., 2002, 50, 5, 1118-1125.
ethyl cyclohexanoate*§	0.06	-	-	-	-	-	9.43	1148	1146	-		Fan, W.; Qian, M.C., Characterization of Aroma Compounds of Chinese Wuliangye and Jiannanchun Liquors by Aroma Extract Dilution Analysis, J. Agric. Food Chem., 2006, 54, 7, 2695-2704.
camphor	0.08	-	-	-	-	-	9.75	1164	1164	-		Eyres, G.; Dufour, J.-P.; Hallifax, G.; Sotheeswaran, S.; Marriott, P.J., Identification of character-impact odorants in coriander and wild coriander leaves using gas chromatography-olfactometry (GCO) and comprehensive two-dimensional gas chromatography-time-of-flight mass spectrometry (GC×GC-TOFMS), J. Sep. Sci., 2005, 28, 9-10, 1061-1074.
unknown 6	-	1.09	-	-	1.67	-	9.89	1170	-	-	x	-
p-ethylphenol	56.92	-	-	-	-	-	10.32	1192	1092	-		Jiménez, A.; Aguilera, M.P.; Beltrán, G.; Uceda, M., Application of solid-phase microextraction to virgin olive oil quality control, J. Chromatogr. A, 2006, 1121, 1, 140-144.
undecanone	-	-	-	0.43	-	-	10.43	1197	-	-		-
dodecane	-	-	-	0.92	-	-	10.53	1202	1200	x		-
unknown 7	-	-	-	-	0.77	-	10.56	1204	-	-	x	-
decanal	-	-	-	0.86	0.74	-	10.86	1220	1208	-		Alissandrakis E.; Tarantilis P.A.; Harizanis P.C.; Polissiou M., Comparison of the volatile composition in thyme honeys from several origins in Greece, J. Agric. Food Chem., 2007, 55, 20, 8152-8157.
beta-cyclocitral	-	0.68	-	-	0.94	-	11.17	1236	1227	-		Brückner, A.; Stabentheiner, E.; Leis, H.J.; Raspotnig, G. 2015. Chemical basis of unwettability in Liacaridae (Acari, Oribatida): specific variations of a cuticular acid/ester-based system. Exp Appl Acarol 66/3, 313-335
quinoline	-	-	3.21	-	-	-	11.69	1264	1242	x		Du, Z.; Clery, R.; Hammond, C.J., Volatile organic nitrogen-containing constituents in ambrette seed Abelmoschus moschatus Medik (Malvaceae), J. Agric. Food Chem., 2008, 56, 16, 7388-7392.
p-propylphenol	0.31	-	-	-	-	-	12.12	1287	1285	-		Czerny, M.; Brueckner, R.; Kirchoff, E.; Schmitt, R.; Buettner, A., The influence of molecular structure on odor qualities and odor detection thresholds of volatile alkylated phenols, Chem. Senses, 2011, 1-15
tridecane	-	-	-	1.29	-	-	12.39	1302	1300	x		-
1H-indole	0.67	-	41.77	-	-	1.3	12.80	1326	1328	x		Moio L.; Rillo L.; Ledda A.; Addeo F., Odorous constituents of ovine milk in relationship to diet, J. Dairy Sci., 1996, 79, 8, 1322-1331.
tetrahydroquinoline (based on MS only, compared to quinoline)	-	-	0.39	-	-	-	13.39	1360	-	-	x	-
unknown 8	-	-	-	1.17	-	-	14.12	1401	-	-	x	-
tetradecane	-	-	-	-	0.47	-	14.12	1402	1400	x		-
sesquiterpene 1	-	-	-	1.25	-	-	14.16	1404	-	-	x	-
beta-caryophyllene	-	0.18	-	0.37	-	-	14.31	1413	1413	-		Silva-Brandão, K.L.; Solferini, V.N.; Trigo, J.R., Chemical and phylogenetic relationships among Aristolochia L. (Aristolochiaceae) from southeastern Brazil, Biochem. Syst. Ecol., 2006, 34, 4, 291-302.
skatole	0.19	0.51	-	-	-	2.1	14.39	1418	1420	x		Young, O.A.; Lane, G.A.; Priolo, A.; Fraser, K., Pastoral and species flavour in lambs raised on pasture, lucerne or maize, J. Sci. Food Agric., 2003, 83, 2, 93-104.
sesquiterpene 2	-	13.02	-	1.51	2.1	-	14.57	1429	-	-	x	-
sesquiterpene 3	-	-	-	0.14	-	-	14.77	1441	-	-	x	-
sesquiterpene 4	-	-	-	1.35	0.48	0.04	15.07	1459	-	-	x	-
sesquiterpene 5	-	1.66	-	-	0.18	-	15.19	1467	-	-	x	-
sesquiterpene 6	-	-	-	-	-	0.04	15.55	1489	-	-	x	-
sesquiterpene 7	-	-	-	0.43	0.17	-	15.63	1493	-	-	x	-
sesquiterpene 8	-	-	-	1.33	0.38	-	15.75	1501	-	-	x	-
sesquiterpene 9	-	1.96	-	-	0.82	-	16.29	1536	-	-	x	-

*tentatively assigned based on library hit only
§ possibly contaminantes from plastic bags