

Supplementary information

Table S1. Volatile organic compounds identified within the headspace fraction above the HCASMC cell cultures treated with virgin (V) MPs and aged (A) MPs (HDPE: high-density polyethylene, LDPE: low-density polyethylene, and PS: polystyrene) and their concentration levels expressed as mean (min-max).

Analyte ID	Analyte	Concentration (ppbv)						
		CTRL	HDPE_V	HDPE_A	LDPE_V	LDPE_A	PS_V	PS_A
VOC1	Pentane	3 (1-2)	2 (1-3)	4 (3-5)	3 (2-3)	6 (5-8)	2 (1-3)	14 (11-19)
VOC2	Acrolein	3 (2-3)	10 (8-13)	42 (30-55)	5 (4-8)	9 (5-14)	2 (2-4)	54 (42-71)
VOC3	Propanal	42 (33-54)	13 (10-17)	110 (79-141)	51 (35-78)	122 (94-179)	20 (12-29)	398 (285-554)
VOC4	Acetone	16 (8-25)	315 (27-717)	87 (63-110)	97 (79-132)	20 (13-32)	35 (8-69)	51 (5-110)
VOC5	Carbon sulphide	0.2 (0.1-0.5)	7 (0.2-16)	8 (6-10)	9 (6-15)	5 (1-10)	7 (1-15)	3 (1-12)
VOC6	2-methylpentane	3 (3-4)	3 (2-4)	522 (374-664)	15 (11-24)	259 (50-523)	36 (2-83)	56 (44-75)
VOC7	2-methylpropanal	0.6 (0.3-1)	435 (22-1015)	94 (68-118)	193 (92-358)	2 (1-3)	0.3 (0.3-0.5)	122 (98-144)
VOC8	2,3-butanedione	4 (2-8)	49 (4-76)	7 (2-11)	38 (2-96)	19 (5-43)	5 (2-13)	11 (2-16)
VOC9	2-butanone	2 (0.8-3)	51 (1-120)	5 (3-6)	49 (7-116)	16 (4-37)	6 (1-12)	9 (1-18)
VOC10	Ethyl acetate	1 (1-2)	76 (1-181)	6 (4-7)	18 (5-39)	3 (1-6)	20 (1-45)	9 (1-19)
VOC11	2-methyl-1-propanol	0.8 (0.6-1.2)	121 (3-286)	2 (1-3)	44 (6-95)	3 (1-5)	52 (1-119)	2 (1-3)
VOC12	3-methylbutanal	0.3 (0.2-0.4)	182 (40-381)	135 (95-175)	230 (150-366)	210 (120-316)	110 (1-254)	2 (1-4)
VOC13	2-methylbutanal	0.8 (0.3-1.2)	45 (23-290)	12 (8-16)	38 (24-60)	3 (1-6)	27 (1-62)	0.1 (0.1-0.2)
VOC14	2-pentanone	77 (23-130)	38 (27-53)	62 (45-79)	19 (12-56)	50 (28-73)	21 (12-33)	67 (15-136)
VOC15	3,3-dimethyl-2-butanone	44 (21-100)	28 (17-32)	41 (25-89)	17 (13-46)	47 (18-53)	24 (13-43)	57 (11-101)
VOC16	4-methyl-2-pentanone	25 (4-45)	660 (395-987)	65 (46-82)	530 (54-1268)	453 (191-757)	25 (1-55)	50 (33-69)
VOC17	Octane	46 (9-82)	508 (370-692)	199 (143-253)	285 (180-461)	171 (57-310)	60 (12-123)	72 (63-86)
VOC18	Hexanal	17 (4-29)	958 (719-990)	785 (567-992)	131 (16-309)	906 (490-989)	81 (29-147)	928 (817-963)
VOC19	Nonane	41 (13-72)	58 (30-69)	29 (13-53)	182 (80-291)	141 (37-210)	40 (11-93)	52 (23-96)
VOC20	5-methyl-2-hexanone	0.9 (0.6-1.1)	536 (2-1284)	17 (13-22)	324 (124-453)	13 (9-16)	857 (2-1976)	33 (1-74)
VOC21	3-heptanone	36 (27-48)	108 (2-257)	48 (35-62)	430 (12-1076)	82 (30-169)	12 (6-19)	13 (4-23)
VOC22	Heptanal	8 (6-11)	300 (62-636)	78 (56-98)	84 (29-171)	86 (34-147)	44 (14-83)	75 (10-159)
VOC23	2-methyl-3-heptanone	7 (5-9)	118 (83-161)	7 (5-9)	46 (23-85)	54 (24-89)	70 (4-156)	9 (4-15)
VOC24	5-methyl-3-heptanone	21 (5-36)	291 (121-527)	7 (5-9)	103 (72-158)	54 (79-217)	142 (79-217)	10 (5-15)
VOC25	3-octanone	26 (9-32)	247 (103-425)	8 (2-11)	95 (70-178)	62 (81-191)	132 (81-227)	12 (4-16)
VOC26	Benzaldehyde	28 (9-48)	984 (30-3160)	345 (247-440)	367 (264-479)	161 (66-271)	290 (5-662)	14 (12-16)
VOC27	Undecane	23 (3-52)	27 (9-54)	227 (162-289)	631 (11-1449)	204 (4-8507)	3678 (4-8502)	23 (6-43)
VOC28	2-nonanone	8 (5-11)	18 (7-33)	45 (33-58)	25 (18-38)	16 (9-22)	7 (11-45)	5 (3-7)