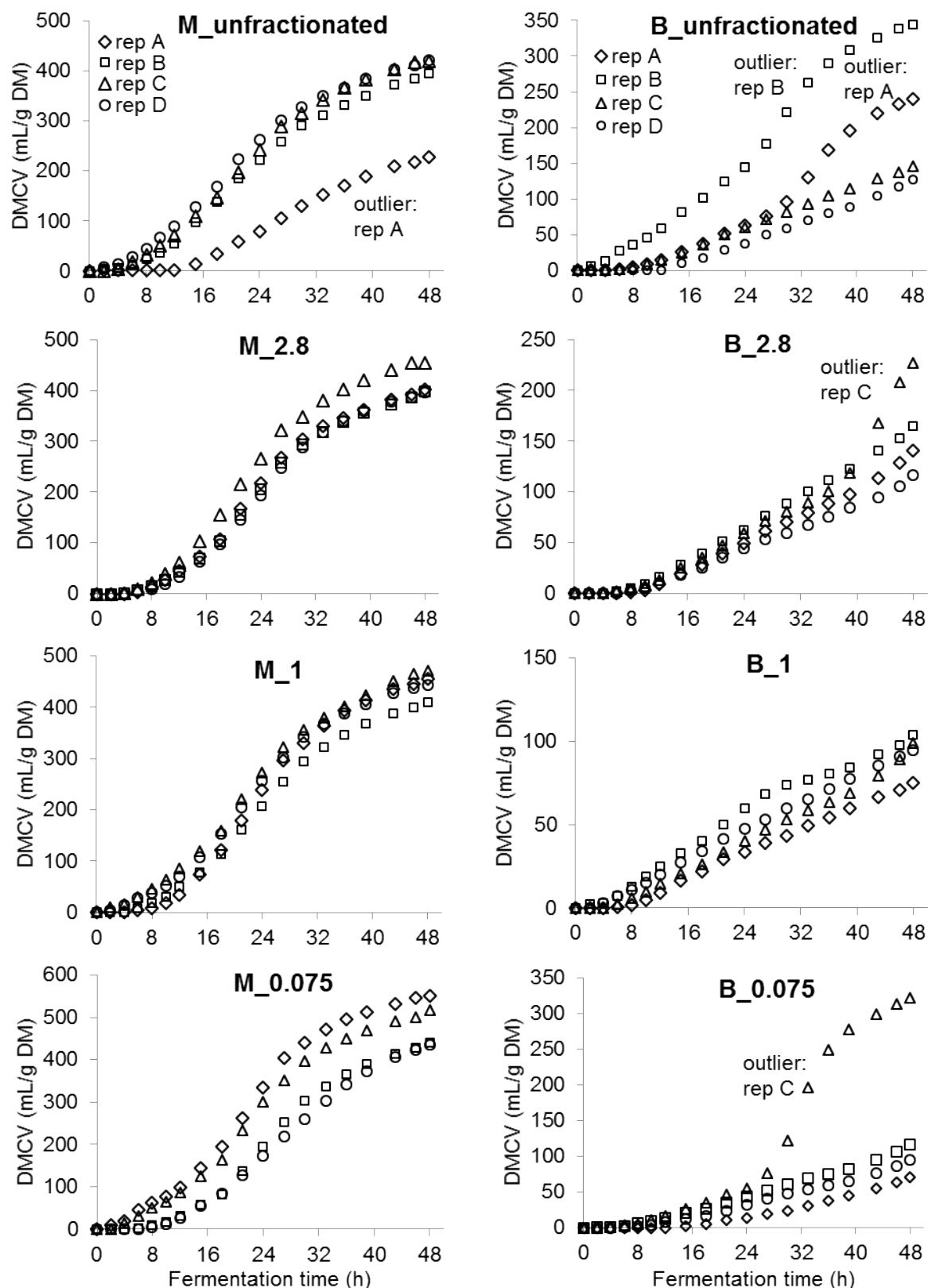


1 **Supplementary data**

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5 Figure S1. Dry matter cumulative volume (DMCV₄₈) time course profiles (g/mL dry matter)
6 of replicates of masticated mango and banana particles (unfractionated, 2.8, 1, 0.075 mm)
7 during 48 h microbial fermentation *in vitro*. M, mango; B, banana; rep, replicate.

8 Table S1. Fruit and particle size effects on fermentation kinetics, pH, short chain fatty acids, ammonia and branched-chain ratio of
9 masticated mango and banana particles during 48 h microbial fermentation *in vitro*.

Treatment	<i>n</i>	DMCV ₄₈ (mL/g DM)	<i>T</i> _{1/2} (h)	<i>TR</i> _{max} (h)	<i>R</i> _{max} (mL/h)	Acetic acid	Propionic acid	Butyric acid	Total SCFA	NH ₃	BCR ¹	pH
<u>Fruit</u>												
Mango	15	440.39 ^a	24.90 ^b	19.41 ^b	16.96 ^a	9.93 ^a	2.14 ^a	1.41 ^a	15.42 ^a	11.42 ^a	0.26 ^b	6.36 ^a
Banana	11	113.65 ^b	53.52 ^a	30.51 ^a	3.18 ^b	2.91 ^b	0.86 ^b	0.60 ^b	4.99 ^b	4.15 ^b	0.28 ^a	6.50 ^a
MSD		26.23	5.87	2.85	1.08	0.25	0.076	0.047	0.41	0.95	0.008	0.20
<u>Particle size</u>												
<u>Unfractionated</u>												
2.8 mm	5	301.53 ^a	31.11 ^b	22.00 ^{bc}	10.53 ^a	7.47 ^a	2.15 ^a	1.24 ^a	12.44 ^a	9.78 ^a	0.27 ^b	6.31 ^a
1 mm	7	296.03 ^a	37.75 ^{ab}	25.46 ^{ab}	11.39 ^a	6.69 ^b	1.44 ^c	0.99 ^b	10.39 ^b	7.26 ^b	0.24 ^c	6.51 ^a
0.075 mm	7	293.40 ^a	33.04 ^b	18.95 ^c	10.70 ^a	6.31 ^b	1.29 ^c	0.89 ^c	9.75 ^b	8.12 ^{ab}	0.29 ^a	6.44 ^a
MSD	7	317.48 ^a	44.45 ^a	29.42 ^a	11.73 ^a	7.51 ^a	1.67 ^b	1.18 ^a	11.88 ^a	9.20 ^a	0.28 ^{ab}	6.37 ^a
		49.83	11.15	5.41	2.04	0.48	0.14	0.089	0.79	1.78	0.015	0.37
<u>Fruit x Psize</u>												
<u>Mango</u>												
Unfractionated	3	411.65 ^a	24.10 ^d	17.19 ^d	14.89 ^b	9.83 ^b	2.66 ^a	1.54 ^a	16.10 ^a	12.61 ^{ab}	0.28 ^b	6.15 ^a
2.8 mm	4	412.40 ^a	24.17 ^d	20.07 ^{cd}	17.13 ^{ab}	9.40 ^b	1.83 ^c	1.25 ^b	14.27 ^b	10.14 ^b	0.25 ^{bcd}	6.51 ^a
1 mm	4	445.14 ^a	25.01 ^{cd}	19.17 ^d	16.90 ^{ab}	9.30 ^b	1.85 ^c	1.24 ^b	14.13 ^b	10.00 ^b	0.24 ^{cd}	6.36 ^a
0.075 mm	4	485.20 ^a	26.14 ^{cd}	20.66 ^{cd}	18.43 ^a	11.14 ^a	2.37 ^b	1.62 ^a	17.36 ^a	13.22 ^a	0.28 ^b	6.39 ^a
<u>Banana</u>												
Unfractionated	2	136.35 ^b	41.64 ^{bcd}	29.23 ^{bc}	4.00 ^c	3.92 ^c	1.39 ^d	0.78 ^c	6.94 ^c	5.52 ^c	0.26 ^{bcd}	6.54 ^a
2.8 mm	3	140.87 ^b	55.85 ^{ab}	32.64 ^{ab}	3.75 ^c	3.08 ^d	0.92 ^e	0.64 ^{cd}	5.21 ^d	3.43 ^c	0.23 ^d	6.51 ^a
1 mm	3	91.08 ^b	43.47 ^{bc}	18.65 ^d	2.43 ^c	2.32 ^d	0.56 ^f	0.43 ^e	3.90 ^d	4.35 ^c	0.35 ^a	6.55 ^a
0.075 mm	3	93.87 ^b	68.87 ^a	41.10 ^a	2.80 ^c	2.65 ²	0.75 ^{ef}	0.59 ^{de}	4.57 ^d	3.83 ^c	0.27 ^{bc}	6.39 ^a
MSD		86.21	19.28	9.36	3.53	0.83	0.25	0.15	1.36	3.13	0.026	0.65
<u>Probability</u>												
Fruit		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.16
Psize		0.43	0.020	0.0002	0.180	<0.0001	<0.0001	<0.0001	<0.0001	0.0026	<0.0001	0.49
Fruit x Psize		0.0065	0.016	0.0002	0.041	<0.0001	<0.0001	<0.0001	<0.0001	0.048	<0.0001	0.52

10 *a,b,c,d,e,f* Different letters within each treatment effect denote significance differences ($P<0.05$). DMCV₄₈: cumulative gas production during 48 h fermentation, *T*_{1/2}: half
11 time of asymptote gas production, *TR*_{max}: time of maximum rate of gas production, *R*_{max}: maximum rate of gas production, SCFA: short chain fatty acids, NH₃:
12 ammonia, BCR: branched-chain ratio, MSD: minimum significant difference, Psize: particle size. All SCFA and NH₃ values are expressed as mmol/g DM. ¹All
13 individual SCFA production values are also converted using acetic acid equivalents, i.e. AAC=acetic x 60; APR=propionic x 74 x 1.21; ABU=butyric x 88 x 1.36;
14 AIBU=isobutyric x 88 x 1.36; AIVAL=isovaleric x 102 x 1.46; AVAL=valeric x 102 x 1.46. BCR=(AIBU+AIVAL+AVAL)/(AAC+APR+ABU).