Table S1: Composition analysis for Fat-filled whole milk powder (FFWMP), skim milk powder (SMP) and infant milk formula (IMF). Each result is the average of 2 replicates.

Sample	**Fat %**	**Protein %**	**Lactose %**	**Total solids %**	**True protein %**	**Casein %**
FFWMP (AM)	3.6	3.4	5.1	13.2	3.2	2.3
SMP (AM)	0.03	3.7	5.6	10	3.5	2.8
IMF (AM)	2.8	1.7	7.5	12.8	1.5	1.1
FFWMP (CON)	3.7	3.4	5.2	12.8	3.2	2.4
SMP (CON)	0.03	3.8	5.6	10.2	3.6	2.9
IMF (CON)	2.8	1.7	7.9	12.8	1.5	1.1
FFWMP (ACC)	3.8	3.5	5.3	13.2	3.3	2.4
SMP (ACC)	0.02	3.7	5.6	10	3.6	2.8
IMF (ACC)	2.9	1.7	7.8	12.8	1.5	1.1
FFWMP (HUM)	3.6	3.4	5.1	12.6	3.2	2.3
SMP (HUM)	0.03	3.8	5.7	10.2	3.6	2.9
IMF (HUM)	2.8	1.6	7.8	12.7	1.5	1.1

Table S2: Results of One-way ANOVA followed by post hoc Tukey test for the colour of the 12 reconstituted milk powders after 4 months in storage. Data are expressed as mean ± standard deviation (n = 3). Different superscripts within a column indicate significant differences (p = 0.001).

Sample	L	a (-)	b	*P-value*
FFWMP (AM)	87.62 ± 0.01a	2.89 ± 0.49a	6.31 ± 0.07a	***
SMP (AM)	77.09 ± 0.11b	5.72 ± 0.44b	2.48 ± 0.68b	***
IMF (AM)	84.88 ± 0.02c	3.10 ± 0.92c	4.51 ± 0.10c	***
FFWMP (CON)	86.03 ± 0.01d	2.68 ± 0.63d	6.05 ± 0.08d	***
SMP (CON)	77.52 ± 0.01e	5.77 ± 0.37b	2.44 ± 0.33e	***
IMF (CON)	83.43 ± 0.12f	3.08 ± 1.07c	4.20 ± 0.30f	***
FFWMP (ACC)	87.30 ± 0.01g	2.89 ± 0.43a	6.63 ± 0.00g	***
SMP (ACC)	77.64 ± 0.03e	5.83 ± 0.08b	2.65 ± 0.31h	***
IMF (ACC)	84.89 ± 0.01c	3.07 ± 0.31c	4.75 ± 0.31i	***
FFWMP (HUM)	90.30 ± 0.01h	2.79 ± 0.34i	6.26 ± 0.08j	***
SMP (HUM)	77.46 ± 0.03e	5.71 ± 0.44b	2.62 ± 0.48h	***
IMF (HUM)	84.42 ± 0.01c	3.14 ± 1.05c	4.15 ± 0.34k	***

Table S3: Fatty acid (FA) composition (g/100 g of FA ± SD; n = 3) of infant milk formula (IMF) powder samples (brand 1–5).

Fatty Acids	**IMF Brand 1**	**IMF Brand 2**	**IMF Brand 3**	**IMF Brand 4**	**IMF Brand 5**	***P* - Value**
Butyric acid C4:0	0.82 ± 0.08	0.07 ± 0.01	0.06 ± 0.01	0.05 ± 0.01	0.04 ± 0.01	<0.001
Caproic acid C6:0	0.32 ± 0.01	0.20 ± 0.01	0.26 ± 0.02	0.24 ± 0.02	0.02 ± 0.01	<0.001
Octanoic acidC8:0	0.26 ± 0.01	1.74 ± 0.07	2.36 ± 0.13	2.18 ± 0.19	0.03 ± 0.01	0.03
Decanoic acid C10:0	0.44 ± 0.01	1.33 ± 0.01	1.75 ± 0.01	1.63 ± 0.13	0.04 ± 0.01	<0.001
Lauric Acid C12:0	1.35 ± 0.01	9.51 ± 0.66	12.38 ± 0.26	11.66 ± 0.89	0.21 ± 0.01	<0.001
Tridecanoic acid C13:0	0.01 ± 0.01	0.01 ± 0.01	0.01 ± 0.01	0.01 ± 0.01	ND	<0.001
Myristic acid C14:0	1.83 ± 0.01	3.93 ± 0.20	4.78 ± 0.05	4.58 ± 0.30	0.70 ± 0.07	<0.001
Myristoleic acid C14:1 c9	0.15 ± 0.01	0.02 ± 0.00	0.01 ± 0.01	0.01 ± 0.01	ND	<0.001
Pentadecanoic acid C15:0	0.25 ± 0.01	0.05 ± 0.00	0.05 ± 0.01	0.05 ± 0.01	0.05 ± 0.01	<0.001
Palmitic acid C16:0	18.97 ± 0.38	17.28 ± 0.17	14.92 ± 0.09	14.77 ± 0.58	24.36 ± 1.72	<0.001
Palmitoleic acid C16:1 c9	0.26 ± 0.01	0.16 ± 0.01	0.14 ± 0.01	0.16 ± 0.01	0.14 ± 0.01	<0.001
Heptadecanoic acid C17:0	0.14 ± 0.01	0.09 ± 0.01	0.06 ± 0.01	0.07 ± 0.01	0.08 ± 0.01	0.001

Stearic acid C18:0	4.15 ± 0.23	2.56 ± 0.10	2.19 ± 0.05	2.20 ± 0.02	3.30 ± 0.11	<0.001
Oleic acid C18:1 n9c	27.54 ± 0.75	28.02 ± 0.80	27.61 ± 0.47	27.54 ± 0.52	30.36 ± 1.52	0.092
Elaidic acid C18:1 n9t	3.18 ± 0.18	1.59 ± 0.01	1.48 ± 0.01	1.58 ± 0.21	2.23 ± 0.42	0.003
Linoleic acid C18:2 n6c	17.54 ± 0.56	13.12 ± 0.32	9.97 ± 0.15	10.18 ± 0.17	15.45 ± 0.82	<0.001
trans-9,12-octadecadienoate C18:2 n6t	18.47 ± 1.74	16.87 ± 0.22	17.91 ± 0.13	18.97 ± 2.53	19.78 ± 3.78	0.736
α-Linolenic acid C18:3 n3	1.94 ± 0.06	1.49 ± 0.05	1.74 ± 0.01	1.83 ± 0.04	1.52 ± 0.07	0.001
Gamma Linolenic Acid c18:3 n6	0.02 ± 0.01	0.10 ± 0.01	0.17 ± 0.03	0.16 ± 0.04	0.08 ± 0.02	0.009
Eicosanoic acid C20:0	0.24 ± 0.01	0.22 ± 0.02	0.21 ± 0.01	0.21 ± 0.01	0.27 ± 0.01	0.011
cis-11-Eicosenoic acid C20:1	0.24 ± 0.01	0.26 ± 0.02	0.27 ± 0.01	0.28 ± 0.01	ND	<0.001
Eicosenoic acid C20:2	0.03 ± 0.01	0.01 ± 0.01	ND	ND	ND	0.044
Nervonic acid C24:1 n9	0.26 ± 0.02	0.21 ± 0.09	0.15 ± 0.09	0.16 ± 0.01	0.20 ± 0.09	0.541
Eicosapentaenoic acid C20:5	0.05 ± 0.01	0.04 ± 0.06	ND	ND	ND	0.247
CLA C18:2 c9t11	1.55 ± 0.14	1.12 ± 0.06	1.32 ± 0.01	1.48 ± 0.20	1.15 ± 0.23	0.111