Correction to: Crystallization Kinetics and Mechanical Properties of Nougat Creme Model Fats

Stephen-Sven Hubbes¹ · André Braun² · Petra Foerst³

Published online: 7 August 2019

© Springer Science+Business Media, LLC, part of Springer Nature 2019

Correction to: Food Biophysics

<https://doi.org/10.1007/s11483-019-09596-w>

The original version of this article unfortunately contained errors. During final layout the format of Table 1 was displaced and an odd symbol was inserted in Eq. 2. The correct versions are given below.

$$G' \sim \Phi^{1/(d-D)} \sim \tau_0 \quad (2)$$

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

The online version of the original article can be found at <https://doi.org/10.1007/s11483-019-09596-w>

✉ Petra Foerst
petra.foerst@tum.de

¹ Rapunzel Naturkost GmbH, Rapunzelstr. 1, 87764 Legau, Germany

² Anton Paar Germany GmbH, Hellmuth-Hirth-Str. 6,
73760 Ostfildern-Schramhausen, Germany

³ Lehrstuhl für Systemverfahrenstechnik, Department of Food and Life Sciences, Technical University of Munich (TUM),
85354 Freising, Germany

Table 1 The experimental setup and the different fat samples (with their respective Tripalmitin content) used for oscillation rheology and the isothermal DSC studies for the investigation of structural properties and crystallization kinetics

Fat samples			Oscillation Rheology			DSC studies used for the Avrami model											
		Tripalmitin content [%]	stress sweeps [Pa]; f = 1 Hz	Applied normal force, F [N]	frequency sweeps [Hz]	Isothermal crystallization temperature T _{isotherm} [°C]											
Geographical origins of palm oil																	
A	Ecuador, 100%	6.75 (± 0.13)	1–12000	10	0.1–100	16	18	19	19.5	20	20.5	21	21.5	22	23	24	
B	Ghana, 100%	7.17 (± 0.36)	1–12000	10	0.1–100	16	18	19	19.5	20	20.5	21	21.5	22	23	24	
C	Colombia, 100%	7.98 (± 0.23)	1–12000	10	0.1–100	16	18	19	19.5	20	20.5	21	21.5	22	23	24	
Blends of Ecuadorian palm oil with palm stearin (PS)																	
A-1	95% ± 5% PS	7.45 (± 0.13)	1–15000	10	0.1–100	19	18	19	19.5	20	20.5	21	21.5	22	23	24	25 26
A-2	90% ± 10% PS	8.15 (± 0.14)	1–15000	10	0.1–100	16	18	19	19.5	20	20.5	21	21.5	22	23	24	25 26 27
A-3	80% ± 20% PS	9.54 (± 0.15)	1–15000	10	0.1–100	19	20	21	22	23	24	24.5	25	25.5	26	27	28
Blends of Ghanaian palm oil with hazelnut oil (HO)																	
B-1	90% ± 10% HO	6.45 (± 0.29)	1–12000	10	0.1–100												
B-2	80% ± 20% HO	5.73 (± 0.25)	1–6000	10	0.1–100	16	17	18	19	19.5	20	20.5	21	22			
B-3	70% ± 30% HO	5.02 (± 0.22)	1–3000	1	0.1–100												
B-4	60% ± 40% HO	4.30 (± 0.19)	0.1–1000	1	0.05–50	12	14	16	16.5	17	17.5	18	19	20			
B-5	50% ± 50% HO	3.58 (± 0.16)	0.01–1000	0.2	0.02–20	12	13	14	15	16	17	18	19				
B-6	40% ± 60% HO	2.87 (± 0.13)	0.01–1000	0.2	0.02–20	8	9	10	11	12	13	14	15	16			

All the origins of palm oil and all the blends have been studied with triplicate measures for the DSC studies and quintuplicate measures for the rheological studies. Values in parenthesis represent confidence intervals ($\alpha = 0.05$) for the different origins of palm oil and calculated measurement failure for the blends