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## Cremiger Frischkäse durch Partikelzusatz?

Effekte von Partikeln mit unterschiedlichen Eigenschaften bei vergleichbarer Größe

## Literaturverzeichnis

- Adams, S., Frith, W. J., & Stokes, J. R. (2004). Influence of particle modulus on the rheological properties of agar microgel suspensions. *Journal of Rheology*, 48(6), 1195–1213. <https://doi.org/10.1122/1.1795193>
- De Wijk, R. A., Prinz, J. F., & Janssen, A. M. (2006). Explaining perceived oral texture of starch-based custard desserts from standard and novel instrumental tests. *Food Hydrocolloids*, 20(1), 24–34. <https://doi.org/10.1016/j.foodhyd.2005.02.008>
- Folkenberg, D. M., & Martens, M. (2003). *Sensory properties of low fat yoghurts. Part B: Hedonic evaluations of plain yoghurts by consumers correlated to fat content, sensory profile and consumer attitudes. Milchwissenschaft* (Vol. 58).
- Frøst, M. B., & Janhøj, T. (2007). Understanding creaminess. *International Dairy Journal*, 17(11), 1298–1311. <https://doi.org/10.1016/j.idairyj.2007.02.007>
- Fysun, O., Nöbel, S., Loewen, A. J., & Hinrichs, J. (2018). Tailoring yield stress and viscosity of concentrated microgel suspensions by means of adding immiscible liquids. *LWT - Food Science and Technology*, 93(November 2017), 51–57. <https://doi.org/https://doi.org/10.1016/j.lwt.2018.03.013>

- Garrec, D. A., & Norton, I. T. (2012). The influence of hydrocolloid hydrodynamics on lubrication, *26*, 389–397. <https://doi.org/10.1016/j.foodhyd.2011.02.017>
- Hahn, C., Nöbel, S., Maisch, R., Rösingh, W., Weiss, J., & Hinrichs, J. (2015). Adjusting rheological properties of concentrated microgel suspensions by particle size distribution. *Food Hydrocolloids*, *49*, 183–191. <https://doi.org/10.1016/j.foodhyd.2015.03.020>
- Hahn, C., Sramek, M., Nöbel, S., & Hinrichs, J. (2012b). Post-processing of concentrated fermented milk: Influence of temperature and holding time on the formation of particle clusters. *Dairy Science and Technology*, *92*(1), 91–107. <https://doi.org/10.1007/s13594-011-0046-1>
- Hahn, C., Wachter, T., Nöbel, S., Weiss, J., Eibel, H., & Hinrichs, J. (2012a). Graininess in fresh cheese as affected by post-processing: Influence of tempering and mechanical treatment. *International Dairy Journal*, *26*(1), 73–77. <https://doi.org/10.1016/j.idairyj.2011.12.013>
- Hayakawa, O., Nakahira, K., & Tsubaki, J. I. (1995). Estimation of the optimum refractive index by the laser diffraction and scattering method: On the raw material of fine ceramics. *Advanced Powder Technology*, *6*(1), 47–61. [https://doi.org/10.1016/S0921-8831\(08\)60547-6](https://doi.org/10.1016/S0921-8831(08)60547-6)
- International Dairy Federation (IDF). (2002). Milk and Milk Products – Determination of Nitrogen Content – Routine Method Using Combustion According to the Dumas Principle (IDF 185:200). Brussels, Belgium.
- Ipsen, R. (2016). Microparticulated whey proteins for improving dairy product texture. *International Dairy Journal*, *16*, 34–46. <https://doi.org/10.1016/j.idairyj.2016.08.009>
- Isleten, M., & Karagul-Yuceer, Y. (2010). Effects of Dried Dairy Ingredients on Physical and Sensory Properties of Nonfat Yogurt. *Journal of Dairy Science*, *89*(8), 2865–2872. [https://doi.org/10.3168/jds.s0022-0302\(06\)72559-0](https://doi.org/10.3168/jds.s0022-0302(06)72559-0)
- Janhoj, T., Petersen, C. B., Frost, M. B., & Ipsen, R. (2006). Sensory and rheological

- characterization of low-fat stirred yogurt. *Journal of Texture Studies*, 37(3), 276–299. doi:10.1111/j.1745-4603.2006.00052.x
- Karam, M. C., Gaiani, C., Hosri, C., Burgain, J., & Scher, J. (2013). Effect of dairy powders fortification on yogurt textural and sensorial properties: a review. *Journal of Dairy Research*, 80(4), 400–409. <https://doi.org/10.1017/S0022029913000514>
- Krzeminski, A., Prell, K. A., Busch-Stockfisch, M., Weiss, J., & Hinrichs, J. (2014). Whey protein–pectin complexes as new texturising elements in fat-reduced yoghurt systems. *International Dairy Journal*, 36(2), 118–127. doi:10.1016/j.idairyj.2014.01.018
- Krzeminski, A., Tomaschunas, M., Köhn, E., Busch-Stockfisch, M., Weiss, J., & Hinrichs, J. (2013). Relating creamy perception of whey protein enriched yogurt systems to instrumental data by means of multivariate data analysis. *Journal of Food Science*, 78(2), S314-9. <https://doi.org/10.1111/1750-3841.12013>
- Laiho, S., Williams, R. P. W., Poelman, A., Appelqvist, I., & Logan, A. (2017). Effect of whey protein phase volume on the tribology, rheology and sensory properties of fat-free stirred yoghurts. *Food Hydrocolloids*, 67, 166–177. <https://doi.org/10.1016/j.foodhyd.2017.01.017>
- Loewen, A. J., Nöbel, S., & Hinrichs, J. (2019). *Einstellen rheologischer und sensorischer Eigenschaften konzentrierter fermentierter Milchprodukte über die Mikrogelpartikelgröße und verteilung: Abschlussbericht zum IGF-Projekt AiF 19012 N.*
- Nöbel, S., Hahn, C., Hitzmann, B., & Hinrichs, J. (2014). Rheological properties of microgel suspensions: Viscoelastic modelling of microstructural elements from casein micelles to fermented dairy products. *International Dairy Journal*, 39(1), 157–166. doi:10.1016/j.idairyj.2014.06.001
- Sainani, M. R., Vyas, H. K., & Tong, P. S. (2004). Characterization of particles in cream cheese. *Journal of Dairy Science*, 87(9), 2854–2863. [https://doi.org/10.3168/jds.S0022-0302\(04\)73414-1](https://doi.org/10.3168/jds.S0022-0302(04)73414-1)

- Sandoval-Castilla, O., Lobato-Calleros, C., Aguirre-Mandujano, E., & Vernon-Carter, E. J. (2004). Microstructure and texture of yogurt as influenced by fat replacers. *International Dairy Journal*, 14(2), 151–159. doi:10.1016/S0958-6946(03)00166-3
- Sonne, A., Busch-Stockfish, M., Weiss, J., & Hinrichs, J. (2014). Improved mapping of in-mouth creaminess of semi-solid dairy products by combining rheology, particle size, and tribology data. *LWT - Food Science and Technology*, 59(1), 342–347. <https://doi.org/10.1016/j.lwt.2014.05.047>
- Spinner, S., & Cleek, G. W. (1960). Temperature Dependence of Young 's Modulus of Vitreous Germania and Silica. *Journal of Applied Physics*, 31(8), 1407–1410. <https://doi.org/10.1063/1.1735852>
- Tyle, P. (1993). Effect of size, shape and hardness of particles in suspension on oral texture and palatability. *Acta Psychologica*, 84(1), 111–118. [https://doi.org/http://dx.doi.org/10.1016/0001-6918\(93\)90077-5](https://doi.org/http://dx.doi.org/10.1016/0001-6918(93)90077-5)
- Zeeb, B., Schöck, V., Schmid, N., Majer, L., Herrmann, K., Hinrichs, J., & Weiss, J. (2018). Impact of food structure on the compatibility of heated WPI-pectin-complexes in meat dispersions. *Food & function*, 9(3), 1647–1656. doi:10.1039/c7fo01577a