Effect of gum tragacanth on rheological and physical properties of a flavored milk drink made with date syrup - DTU Orbit (11/08/2017)

Effect of gum tragacanth on rheological and physical properties of a flavored milk drink made with date syrup

Date syrup as a nutritional additive and safe alternative to added sugar is one of the best choices for milk flavoring. In this study, a flavored milk beverage was formulated using date syrup for flavoring the product and gum tragacanth to obtain an acceptable mouth feel. Steady shear and dynamic oscillatory rheological properties of the samples contained 3 concentrations (0, 0.1, 0.2, and 0.3%, wt/wt) of 2 types of gum tragacanth (Astragalus gossypinus and Astragalus rahensis) which at 3 degrees C, were studied. Particle size distribution and colorimetric assays were determined by laser diffractometry and using reflection spectrometer, respectively. Sensory analysis was performed with 25 semitrained panelists, using a 5-point hedonic scale. The results showed that viscoelastic properties, flow behavior parameters, particle size, and color parameters (L*, a*, and b*, where L* represents lightness, a* represents the redness/greenness quality of the color, and b* represents the yellowness and blueness quality of the colors) were significantly affected by the concentration of the gum tragacanth and the severity of this effect was influenced by the type of gum. The use of appropriate type and concentration of gum tragacanth in date milk formulation can improve the texture and mouth feel by affecting on particle size and the flow behavior of this product.

General information
State: Published
Organisations: Shahid Beheshti University of Medical Sciences
Authors: Keshtkaran, M. (Ekstern), Mohammadifar, M. A. (Intern), Asadi, G. H. (Ekstern), Nejad, R. A. (Ekstern), Balaghi, S. (Ekstern)
Number of pages: 10
Pages: 4794-4803
Publication date: 2013
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Dairy Science
Volume: 96
Issue number: 8
ISSN (Print): 0022-0302
Ratings:
BFI (2017): BFI-level 2
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 2
Scopus rating (2016): SJR 1.304 SNIP 1.464 CiteScore 2.66
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): SJR 1.464 SNIP 1.498 CiteScore 2.63
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): SJR 1.43 SNIP 1.505 CiteScore 2.78
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): SJR 1.407 SNIP 1.597 CiteScore 2.82
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): SJR 1.451 SNIP 1.718 CiteScore 2.79
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): SJR 1.411 SNIP 1.59 CiteScore 2.59
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 2
Scopus rating (2010): SJR 1.351 SNIP 1.517
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 2