VEGEMITE AND MARMITE RESEARCH

Research About Two Geographically Beloved Foodstuffs

compiled by Alice Shirrell Kaswell, Improbable Research staff

Vegemite and National Identity

"Vegemite as a Marker of National Identity," Paul Rozin and Michael Siegal, *Gastronomica*, vol. 3, no. 4, Fall 2003, pp. 63–67. The authors, at the University of Pennsylvania and the University of Sheffield, UK, report:

> The preferences of the Australianborn subjects are shown in Table 1, based on a scale ranging from 1 = dislike extremely to 9 = like extremely. These individuals liked Vegemite quite a lot, and the taste for Vegemite was higher in females than in males.... Liking for Vegemite did not correlate substantially with a liking for any of the other sampled foods [chocolate, apples, milk, steak, carrots, etc.]; the highest correlation, not surprisingly, was with Marmite.

Detail from the study "Vegemite as a Marker of National Identity."

Rheology of Marmite (2008)

"Solid–Liquid Transitions in the Rheology of a Structured Yeast Extract Paste, MarmiteTM," David E. White, Geoff D. Moggridge, and D. Ian Wilson, *Journal of Food Engineering*, vol. 88, no. 3, October 2008, pp. 353-363. (*Thanks to Janine and Alexandre Prejean for bringing this to our attention.*) The authors, at the University of Cambridge, UK, report:

The rheology of Marmite[™], a popular yeast extract spread, was studied using a range of techniques. Steady-state data indicated a structured, thixotropic material at ambient temperature; the extent of breakdown and restructuring exhibited a dependence on both stress and strain. At higher temperatures the extent of thixotropy decreased and behaviour approached Newtonian. Nonsteady-state data indicated a period of shear-thickening at shear rates below those at which shear-thinning occurs. Creep tests indicated a transition between solid and liquid regimes at a critical stress that is a strong function of the solids content of the sample.

Table 2. Liking for Vegemite and Australian origins			
	NUMBER	MEAN	STANDARD DEVIATION
All subjects	202	5.92	2.49
Australian-born subjects with Australian-born parents and grandparents	74	6.62	1.94
Non-Australian subjects with non-Australian born parents	44	3.86	2.86

continued >

VEGEMITE AND MARMITE RESEARCH [CONTINUED]

Rheology of Marmite and of Vegemite (2017)

"3D Printing Vegemite and Marmite: Redefining 'Breadboards'," Charles Alan Hamilton, Gursel Alici, and Marc in het Panhuis, *Journal of Food Engineering*, epub 2017. The authors, at the University of Wollongong, Australia, report:

> Here, we present a rheological analysis of two commercially available breakfast spreads, Vegemite and Marmite, and show their compatibility with FLM [Food Layered Manufacturing] in producing 3D structures onto bread substrates. Furthermore, we demonstrated that these materials can be used to fabricate attractive food designs that can be used for educational activities. The inherent conductivity of the breakfast spreads was used to print edible circuits onto a "breadboard."



Detail from the study "3D Printing Vegemite and Marmite: Redefining 'Breadboards'."



Vegemite and Marmite printed into pyramid shapes on toasted bread. (A) Vegemite printed at 25° C, (B) Vegemite printed at 45 °C, (C inted at 45 °C. All scale bars shown are 1 cm in length.

Further detail from the study "3D Printing Vegemite and Marmite: Redefining 'Breadboards'."