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RETRACTION

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Retraction: Stable 'arrested' non-aqueous edible foams based on food emulsifiers

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Retraction of 'Stable 'arrested' non-aqueous edible foams based on food emulsifiers' by A. R. Patel, *Food Funct.*, 2017, **8**, 2115–2120.

The Royal Society of Chemistry hereby wholly retracts this *Food & Function* article following an investigation by the Commission for Research Integrity (CRI) of Ghent University into a complaint concerning data optimisation and falsification affecting this article. After a thorough investigation by the CRI the complaint was proven and then taken for a second opinion to the Flemish Committee for Research Integrity that again decided that falsification had occurred.

The institution informed us that the work was based on a thesis[1] but many of the results in the published article do not match the original research data presented in the thesis. The CRI's conclusion of their investigation was that "*the research data have been optimized (data falsification) which is scientifically unacceptable*".

The CRI provided the Royal Society of Chemistry with their analysis of the integrity of Fig. 4, 5 and 7, which is detailed below.

The photographs of the two tubes presented in Fig. 4 were taken from Fig. 5 and 7 of ref. 1. In addition, the cryo-SEM image in Fig. 4 was reproduced from Fig. 17*f* of ref. 1 but the scale bar was altered.

The CRI informed us that Fig. 5(a) in the article "*represents the size distributions of air bubbles in foams for sucrose esters (SE, 10 : 0) and a combination of sucrose esters and sunflower lecithin (SE : SL, 8 : 2). Different size distributions were given as compared to those in the thesis of Kinga Karp. Prof. Patel states in the article that the size distributions of the SE (10 : 0) and SE : SL (8 : 2) are comparable. However, the original data (from the thesis of Kinga Karp) suggests that the SE (10 : 0) foam has more small bubbles and a different shape than the SE : SL (8 : 2) combination. In addition, the SE : SL (8 : 2) combinations have some very large bubbles (>80 μm) which Prof. Patel does not present in Fig. 5a. Bubbles with size >80 μm have been cut off, while these are the most important ones (they show that SE : SL 8 : 2 is not more stable). In the article Prof. Patel draws conclusions based on adjusted data.*"

In addition, Fig. 5(c) and (d) have been reproduced from ref. 1, but CRI informed us that the image presented in Fig. 5(c) actually represents a 5 wt% SE foam (which is more stable) and not a 10 wt% SE foam as implied in the article.

Regarding the integrity of Fig. 7, the CRI informed us that "*Prof. Patel discusses the temperature stability of oil foams prepared from sucrose esters (SE, 10 : 0) and sucrose esters and sunflower lecithin (SE : SL, 8 : 2). He states that foams prepared from SE : SL (8 : 2) were relatively stable above the melting range of SE : SL (8 : 2) and attributes this to the formation of an elastic film that provided a better stability to air bubbles against internal contact and eventual coalescence. He even relates this to applications: 'such high temperature stability could be of interest for applications such as formulating a cooking foam for shallow frying applications'. However, the two images in Fig. 7, which were presented as a SE : SL (8 : 2) foam, were actually a 7.5 wt% sucrose ester (SE, 10 : 0) foam, without addition of lecithin. In addition, the picture at >70 °C was taken at 65 °C. By relating the wrong picture to the SE : SL (8 : 2), Prof. Patel set-up a theory concluding that the combination works better, which is in fact not the case, referring back to the original data.*"

Signed: Jeanne Andres, Executive Editor, *Food & Function*
Date: 3rd February 2020
Ashok Patel does not agree with this retraction.

References

1 Kinga Karp, *Fabrication and characterization of arrested non-aqueous foam*, Ghent University, 2015–2016.

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