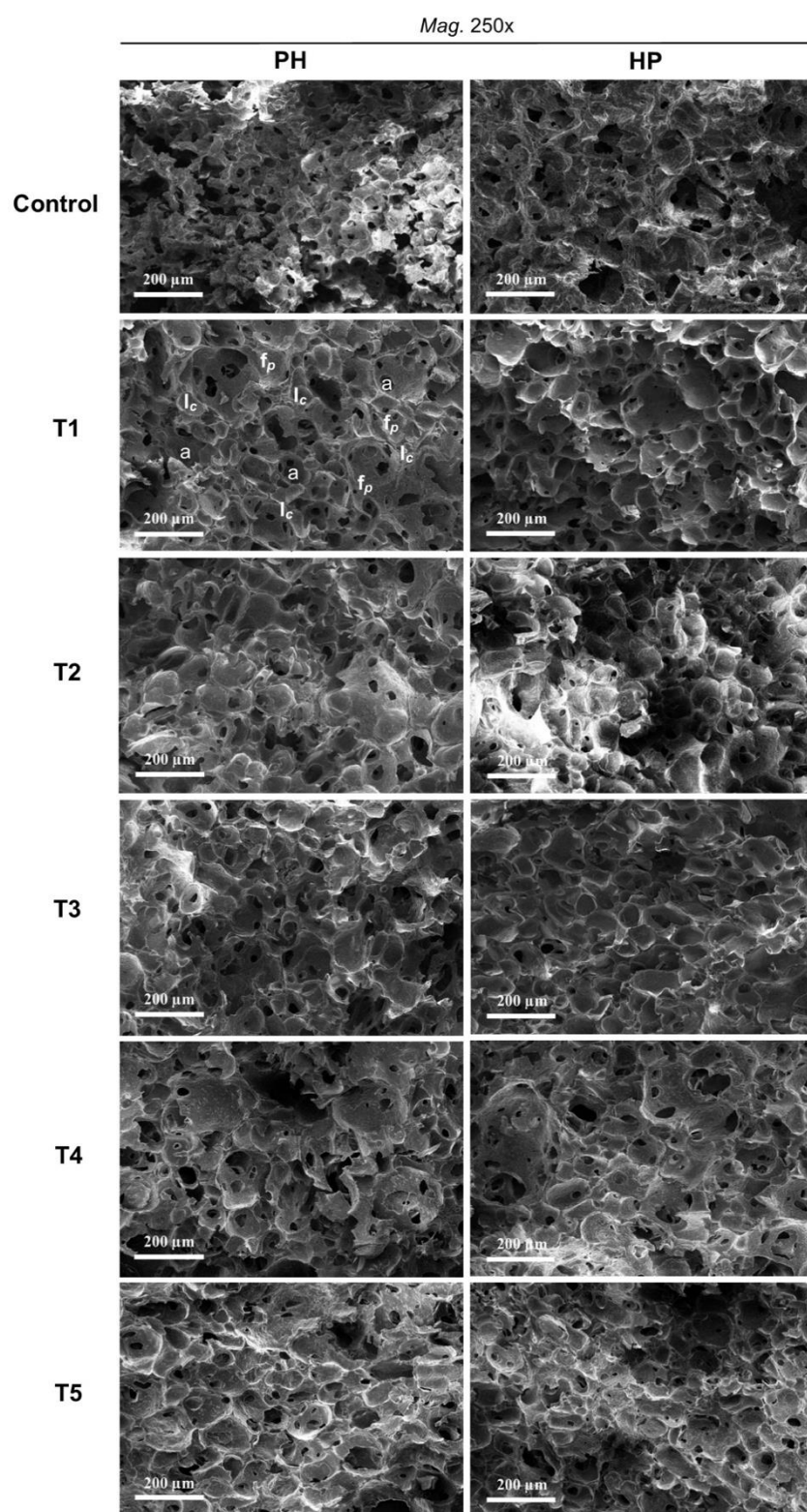


## Supplementary information



*a* – integrated air bubbles.

*I<sub>c</sub>* – ice crystals.

*f<sub>p</sub>* – fat globules and integrated particles of MWPs on the ice cream surface.

**Figure S1.** Microstructural properties of ice cream samples including MWPs at a magnification of 250x.

See **Table 1** for the definition of treatment abbreviations.

### Key finding:

Relatively more compact microstructure of ice cream treatments and the density of air bubbles observed in both cases PH and HP.