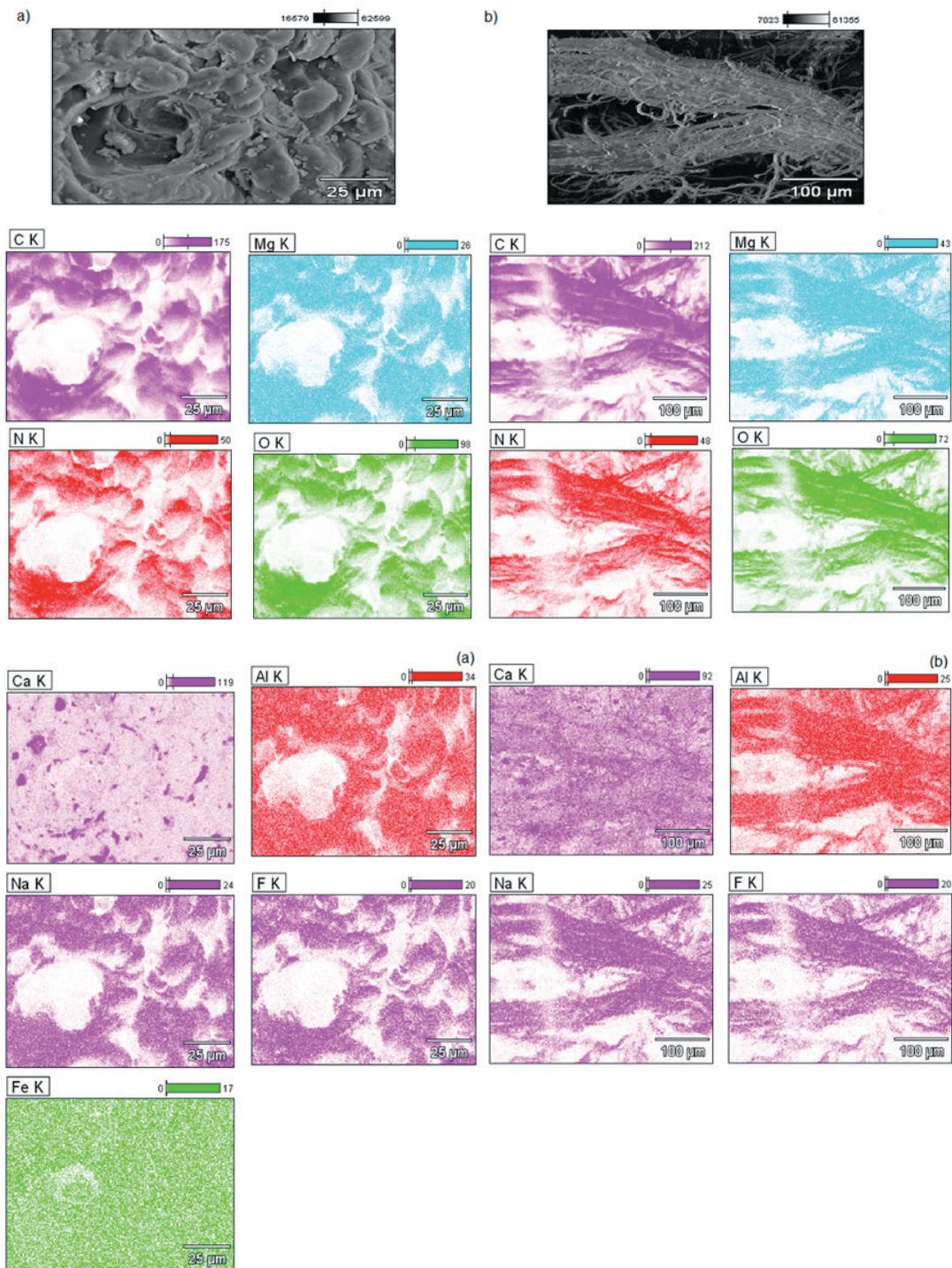


**Fig. S1.** Surface survey spectra of: a) collagen powder (full scale counts: 451 140, cursor: 4.5 keV, 6656 counts) and b) collagen fibre (full scale counts: 522 610, cursor: 4.5 keV, 6930 counts)

**Table S1.** Pearson correlation matrix for the variables: protein, fat, moisture and hydroxyproline (hProline) contents, hardness, mass loss (ML) (oven and grill), appearance, colour, odour, taste and texture of the hamburger formulations on the first day of storage

Variable	Protein	Fat	Moisture	hProline	Hardness	ML (Oven)	ML (Grill)	Appearance	Colour	Odour	Flavour	Texture
Protein	1											
Fat	-0.021	1										
Moisture	0.556*	-0.128	1									
hProline	0.666*	0.116	0.102	1								
Hardness	0.424	0.267	0.407	-0.024	1							
ML (Oven)	0.338	-0.549*	0.158	0.568*	-0.530*	1						
ML (Grill)	0.521*	0.482	0.078	0.418	0.170	0.529*	1					
Appearance	-0.280	0.705*	-0.354	0.006	-0.056	-0.288	-0.425	1				
Colour	-0.588*	0.635*	-0.520	-0.253	-0.235	-0.526*	-0.722*	0.557*	1			
Odour	-0.419	0.650*	-0.442	-0.417	-0.209	-0.669*	-0.342*	0.584*	0.639*	1		
Flavour	0.173	0.748*	-0.316	0.353	0.169	-0.179	0.001	0.534*	0.330	0.514*	1	
Texture	-0.102	0.901*	-0.216	-0.032	0.185	-0.547*	0.379	0.563*	0.582*	0.759*	0.767*	1

\*Significant difference ( $\alpha=0.05$ )



**Fig. S2.** Elemental mapping of the surface of: a) powder and b) fibre collagen