

## S5 Table

### Parameters for the log-normal distributions of the concentration of Bap in barbecued meat

Log-normal distributions with mean,  $\mu$ , and standard deviation,  $\sigma$ , from which the concentration of Bap in  $\mu\text{g/kg}$  in each meat type after barbecuing is derived.

<sup>a)</sup> For the minced beef, we applied a 2-component log-normal model on the data, where the mixing proportions were estimated to be (0.300, 0.700). The optimization technique used for minced beef is the maximum a posterior posterior (MaP) estimation (Fraley & Raftery, 2007)<sup>1</sup>.

<sup>b)</sup> Means for the mixture model.

<sup>c)</sup> Standard deviations for the mixture model.

Meat	Samples	$\leq$ LOD	$\geq$ LOD	$\mu$	$\sigma$
Beaf	87	44	43	-2.326	1.626
Minced beaf <sup>a)</sup>	78	28	50	(2.629, -2.123) <sup>b)</sup>	(0.430, 2.307) <sup>c)</sup>
Pork	70	39	31	-2.932	2.419
Sausages	58	8	50	-1.141	1.991
Lamb	15	2	13	-0.712	1.484
Poultry	53	23	30	-2.134	1.368
Fish	42	13	29	-1.518	1.599
Shellfish	4	0	4	-1.783	0.575

<sup>1</sup>Fraley, C., Raftery, A.E. Bayesian regularization for normal mixture estimation and model-based clustering. Journal of Classification. 2007; 24(2), pp 155-181. doi: 10.1007/s00357-007-0004-z