

**Title** Prevalence and level of *Listeria monocytogenes* and other *Listeria* species in retail pre-packaged mixed vegetable salads in the UK

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### Abstract

As part of the European Commission (EC) co-ordinated programme for 2005, a study of pre-packaged ready-to-eat (RTE) mixed salads containing meat or seafood ingredients from retail premises was undertaken in the UK to determine the frequency and level of *Listeria monocytogenes* in these products. Almost all (99.8%; 2682/2686) samples were of satisfactory/acceptable microbiological quality. Two (0.1%) samples exceeded EC legal food safety criteria due to the presence of *L. monocytogenes* in excess of 100 cfu g<sup>-1</sup> ( $1.7 \times 10^2$ ,  $9.9 \times 10^2$  cfu g<sup>-1</sup>) while another two (0.1%) were unsatisfactory due to *L. welshimeri* levels over 100 cfu g<sup>-1</sup> ( $1.2 \times 10^3$ ,  $6.0 \times 10^3$  cfu g<sup>-1</sup>). Overall contamination of *Listeria* spp. and *L. monocytogenes* found in samples of mixed salads in the UK was 10.8% and 4.8%, respectively. Almost twice as many salad samples with meat ingredients were contaminated with *Listeria* spp. and *L. monocytogenes* (14.7% and 6.0%, respectively) compared to samples with seafood ingredients (7.4% and 3.8%, respectively). Pre-packaged mixed salads were contaminated with *Listeria* spp. and *L. monocytogenes* more frequently when: collected from sandwich shops; not packaged on the premises; stored or displayed above 8 °C. This study demonstrates that the control of *L. monocytogenes* in food manufacturing and at retail sale is essential in order to minimize the potential for this bacterium to be present in mixed salads at the point of consumption at levels hazardous to health.