

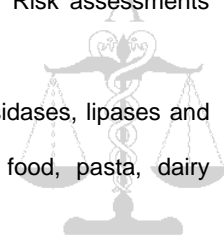
*Advisory Committee on Novel Foods and Processes ACNFP/77/2*  
**Review of Novel Processing Techniques**

The committee has a duty to assess, and where appropriate, approve new techniques of food preparation. Enzymes, ultraviolet and infra red irradiation techniques have been identified as being in need of review and action. Official briefings on these are available from the ACNFP secretariat.

A total of 32 proposed novel food processing techniques [novel as defined by Directive 258/97] have been registered for assessment. 13 were selected for reporting to the committee. Risk assessments were rated on a 3 point priority scale: Act, Watch, and, Wait.

5 new uses for enzymes were reported:

- (i) Cleaning of returnable bottles using proteases, amylases, cellulases, glycosidases, lipases and oxidoraductases,
- (ii) Crosslinking protein molecules using transglutaminase (e.g. surimi, pet food, pasta, dairy spreads, soya based foods, baked products, gelatine)
- (iii) Enzymes extracted from novel bacteria (e.g. extremophiles),
- (iv) Liquefying (e.g. carrots),
- (v) Peeling (e.g. oranges).



The recommendation was that these should be acted upon immediately.

Ultraviolet irradiation (200 – 280nm) to be used for microbial inactivation. Already extensively commercialised on large volume production but there are no industry standards for its use. It is authorised for use on bottled water but it will be used for surface preparation where penetration is unpredictable. There are no clear methods by which to validate its effect and given the nature of solid foods, there is no clear way of ensuring that sufficient surface treatment has occurred.

Infra red irradiation for surface pasteurisations. How should light sources be arranged to ensure the desired effect?

Some new ingredients have been identified as being of particular concern e.g. liquid smoke. Chemical processes can generate unanticipated contaminants. The Maillard reaction [thought to be the source of acrylamide in food] and hydrolysis were reactions of current concern.

**Comment**

Ultraviolet and infra red techniques are already in use. Reliability of these techniques for current and future applications is essential if foods are to be handled safely.

Extensive briefings on these 13 papers are available from the ACNFP secretariat [acnfp@foodstandards.gsi.gov.uk](mailto:acnfp@foodstandards.gsi.gov.uk)