



South Somerset District Council

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**Food and Safety Unit
Environmental Health**

Struvite Crystals in Canned Seafood

There are certain natural constituents of some canned seafood (notably salmon, tuna, mackerel, shrimps, etc.) which, during the canning process can result in the formation of magnesium ammonium phosphate. Very occasionally, this chemical can form crystals, which even more rarely; can grow large enough to attract attention.

The crystals at first appearance look like fragments of glass. Naturally, consumers who are unfamiliar with this may be alarmed and assume that careless factory procedures or sabotage is to blame. However, struvite (as the crystals are called) can be easily differentiated from glass by simple tests in the home.

Struvite crystals have a resemblance to particles of broken glass, but on close examination, especially if a magnifying glass is used, the difference is apparent. Struvite occurs usually in the form of regularly shaped prisms, with the edges tending to form straight lines. Glass particles on the other hand are more likely to be irregular in shape. However, the type of product concerned, and the location of the crystals in the can may produce less regular crystals of struvite.

It is not necessary to rely on differences in appearance to recognise that the fragments are not glass, for struvite crystals are softer. They can be scratched, and when compressed between hard surfaces, will usually break down into smaller crystal fragments or powder.

If you should have any remaining doubt after this examination, place the crystals into warm vinegar or lemon juice and heat gently for a few minutes. The solution will dissolve struvite whereas fragments of glass would remain unaffected.

For more information contact:

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