

Interpretation guide for bromide detection in organic products

Plants take up bromide from the soil. It is not possible to determine analytically if the bromide is from a natural or an anthropogenic source.

Methyl bromide is used for soil sterilisation. The gas can be detected only in the short term (half life in the soil is about 10-30 days). The residue is bromide, which does not decompose and is therefore found in the soil years after exposure to the gas. In such cases bromide should have already been detected in previous samples from the same area, and conventional usage would have been proven.

Bromide can also be from natural sources; this is particularly the case with former seabeds and land in close proximity to the ocean. To estimate this, the geographical location and the bromide/chloride-ratio can be utilized. If the bromide value is caused by sea salt, then normally the chloride value is also increased. In such cases the chloride value should be at least 50 times the bromide value, as a rough estimation. Unfortunately until now there is no reliable data for accurately determining limits for the bromide/chloride-ratio.

Furthermore, methyl bromide is used as a gas in (shipping) containers and as post harvest agent for dried fruit for instance. Therefore calculating back to the fresh product is generally not appropriate.

If inorganic total bromide higher than 5 mg/kg is detected, the source of the increased bromide value should be investigated and if necessary the competent certification body should be informed.

The food can still be traded when inorganic total bromide is higher than 5 mg/kg, if there is no suspicion of illegal use of methyl bromide.

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