

Analysis of Dietary Supplements and Health Foods



Dietary supplements and health foods

The vitamins A, C, D, E, B6, B12, folate, and the minerals selenium, zinc, copper, and iron, are essential for normal immune function. Dietary supplements are highly in demand to boost immunity and prevent deficiencies in these nutrients.

Dietary supplements and their raw materials are diverse, from an extract in a tablet to a tea packet, milk, or oil bottle in the kitchen. Producers and regulators ensure that active compounds are present in these supplements at the levels expected. Geographic origin, freshness, and production-type can affect health benefits and also require testing. LC and GC methods focus on known compounds of importance with many outlined by reference bodies like IOC, ISO, FSSAI, and USP.

Agilent solutions for quality testing

- Fast multivitamin analysis by LC for nutrition labeling
- Easy amino acid analysis by LC for the food and pharmaceutical industry
- Simple fatty acid analysis by GC for milk and oil applications
- Elemental analysis by ICP-OES in infant and health food
- Antibiotics analysis by LC/MS/MS in honey and processed food
- Herbal supplements analysis by LC/MS/MS, GC/MS/MS and ICP-MS

- Immunity Booster
- Vitamin-C, B12 and Zn
- Amino Acids
- Omega Fatty Acids
- Fortified Food
- Herbal Tablets
- Baby Food



Visit this page to download application notes on analysis of dietary supplements and health foods <https://explore.agilent.com/fortifiedfoodsanalysis>

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Agilent ready-to-use methods on analysis of dietary supplements and health foods

5990-7950EN 5990-8668EN	Multivitamin analysis by LC Water-soluble (C, B1, B2, B3, B5, B6, B7, B9, and B12) and fat-soluble (A, D, E, and K) vitamins from multivitamin tablets and food matrices were separated and quantified, even if present in various concentration ranges, in a single injection using the Agilent 1260 Infinity LC.
5994-2122EN	Elemental analysis by ICP-OES Accurate, routine measurement of elements (Ca, Cu, Fe, K, Mg, Mn, Na, P, and Zn) in milk powder and infant formula and can be carried out using the Agilent 5800 ICP-OES in accordance with the ISO 15151 method.
5991-6936EN	Amino acid analysis by LC The Agilent 1260 Infinity II Amino Acid Analysis Solution combines the advantages of the latest developments in LC instrumentation and column technology with proven precolumn derivatization chemistry. Ready-to-use reagents and standards, combined with the application support from Agilent, makes this solution the perfect tool for the amino acid analysis in the food and pharmaceutical industries.
5991-8763EN	Fatty acid analysis by GC The Agilent GC solution for fat (milk) and oil analysis was developed and tested for qualitative and quantitative analysis of FAMES, free fatty acids, and triglycerides to achieve fast, accurate, and reproducible separations for both simple and complex samples.
5994-1317EN	Antibiotics analysis by LC/MS/MS The Agilent 1260 Infinity II LC system coupled with the Agilent Ultivo LC/TQ is used to achieve very low picogram quantities of chloramphenicol (CAP) in honey samples.
5991-9030EN 5991-8482EN	Herbal supplements analysis by LC-MS/MS, GC-MS/MS & ICP-MS Pesticides, multi-elements and other dangerous organic contaminants can be typically determined using LC/MS, GC/MS and ICP-MS in herbal health supplements such as cannabis.



Agilent 8890 GC System



Agilent 1260 Infinity II LC System



Agilent 5800 ICP-OES

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