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Nestlé Quality Assurance Center  
Dublin

# Technical Datasheet

**Analysis Name:** USP Pesticide Screen

**Method Number:** NQA-54.0010

**Scope of Application:** Dietary supplement products and raw materials.

**Description:** Method applicable, but not limited, to dietary supplement products and raw materials for the qualitative determination of pesticides listed in the United States and European Pharmacopeias (USP <561>, <565> and EP ) by LC-MS/MS in positive mode and GC-MS/MS in electron impact mode. The limit of quantitation (QL) varies by compound as USP and EP have set limits. For each analyte, the validated screening target concentrations was found at or below the USP <561> limit (mg/kg). The sample extraction and clean up are based on the QuEChERS method. The final extract is split for the analysis of GC- and LC- amenable pesticides using gas chromatography-tandem mass spectrometry (GC-MS/MS) and liquid chromatography-tandem mass spectrometry (LC-MS/MS), respectively. The reporting limits are based on the limits specified in the appropriate monograph(s).

**Sample Weight Required:** 25 g

**Method Reference:** The United States Pharmacopeia, General Chapter 561: Articles of Botanical Origin. The United States Pharmacopeia, General Chapter 565: Articles of Botanical Origin.  
The European Pharmacopeia, General Chapter 2.08.13: Pesticides Residues.  
AOAC Official Method 2007.01, Pesticides Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate.  
CEN Standard Method EN 15662 Foods of Plant Origin- Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean up by dispersive SPE- QuEChERS-method.

**Analytical Platform:** HPLC-MS/MS and GC-MS/MS



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Compound	Limit (mg/kg)	Compound	Limit (mg/kg)
Acephate	0.1	Fluvalinate, tau-	0.05
Alachlor	0.05	Fonofos	0.05
Aldrin and dieldrin (sum of)	0.05	Heptachlor (sum per USP)	0.05
Azinphos-ethyl	0.1	Hexachlorobenzene	0.1
Azinphos-methyl	1	Hexachlorocyclohexane (sum per USP)	0.3
Bromophos-ethyl	0.05	Lindane (hexachlorocyclohexane, gamma-)	0.6
Bromophos-methyl	0.05	Malathion and malaoxon (sum of)	1
Bromopropylate	3	Mecarbam	0.05
Chlordane (sum per USP)	0.05	Methacrifos	0.05
Chlorfenvinphos	0.5	Methamidophos	0.05
Chlorpyrifos-ethyl	0.2	Methidathion	0.2
Chlorpyrifos-methyl	0.1	Methoxychlor	0.05
Chlorthal-dimethyl	0.01	Mirex	0.01
Cyfluthrin (sum of isomers)	0.1	Monocrotophos	0.1
Cyhalothrin, lambda-	1	Parathion-ethyl and paraoxon-ethyl (sum of)	0.5
Cypermethrin (sum of isomers)	1	Parathion-methyl and paraoxon-methyl (sum of)	0.2
DDT (sum per USP)	1	Pendimethalin	0.1
Deltamethrin	0.5	Pentachloranisol	0.01
Diazinon	0.5	Permethrin (sum of isomers)	1
Dichlofluanid	0.1	Phosalone	0.1
Dichlorvos	1	Phosmet	0.05
Dicofol	0.5	Piperonyl butoxide	3
Dimethoate and omethoate (sum of)	0.1	Pirimiphos-ethyl	0.05
Endosulfan (sum per USP)	3	Pirimiphos-methyl (sum per USP)	4
Endrin	0.05	Procymidone	0.1
Ethion	2	Profenofos	0.1
Etrimphos	0.05	Prothiofos	0.05
Fenchlorphos (sum per USP)	0.1	Pyrethrum (sum per USP)	3
Fenitrothion	0.5	Quinalphos	0.05
Fenpropathrin	0.03	Quintozene (sum per USP)	1
Fensulfothion (sum per USP)	0.05	S-421	0.02
Fenthion (sum per USP)	0.05	Tecnazene	0.05



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Fenvalerate	1.5	Tetradifon	0.3
Flucythrinate	0.05	Vinclozolin	0.4