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PESTICIDES FOR AGRICULTURAL USE

PARATHION

DIETHYL 4-NITROPHENYL PHOSPHOROTHIONATE

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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and Departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Department of Agriculture
Australian Department of Health
Department of Agriculture, NSW
Department of Agriculture, Vic
Department of Agriculture, SA
Department of Primary Industries, Qld
Department of Public Health, Tas
Agricultural and Veterinary Chemicals Association
Pest and Weed Control Association of Australia
Australian Chemical Industry Council
Australian Farmers Federation
Australian Institute of Agricultural Science
CSIRO, Division of Entomology
The Australian Veterinary Association

This standard, prepared by Committee CH/5, Pesticides, was approved on behalf of the Council of the Standards Association of Australia on 22 December 1975, and was published on 1 October 1976.

To keep abreast of progress in industry, Australian standards are subject to regular review. Suggestions for improvement, addressed to the head office of the Association, are welcomed.

AUSTRALIAN STANDARD SPECIFICATION

(FOR DEVELOPMENT)

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NOTES ON AUSTRALIAN ADOPTION OF THE FAO SPECIFICATION

Committee CH/5 - Pesticides of the SAA, under direction of its Chemical Standards Board is undertaking the preparation of a series of standards for pesticides for agricultural use. These will be based on the work of the United Nations' Food and Agriculture Organization.

The Association has accepted the recommendation of Committee CH/5 that selected FAO specifications be adopted for use in Australia forthwith in order to take immediate advantage of the technology incorporated in these internationally recognized documents.

In particular, the FAO specification which follows, viz. FAO code numbers

10.b/1/S/3 to 10.b/5/S/3

is now adopted as an Australian standard for development.

The requirements embodied in this standard will be the subject of detailed investigation and development as necessary to suit Australian conditions and usage.

Committee CH/5 will welcome comment on this standard by persons or organizations engaged in the manufacture, testing and use of these products.

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DISCLAIMER

FAO specifications are developed with the basic objective of ensuring, as far as possible, that pesticides complying with them are satisfactory for the purpose for which they are intended. However, the FAO Working Party of Experts on the Official Control of Pesticides: Section B (Specifications) wishes to emphasize that, owing to the complexity of the problems involved, questions such as the suitability of pesticides for the control of a particular pest must be decided at national or provincial level. These specifications should not be assumed to be an endorsement, by either the Working Party or FAO, of the use of a particular compound for a given purpose.

Accordingly, neither the Food and Agriculture Organization of the United Nations (FAO) nor the members of the FAO Working Party of Experts on the Official Control of Pesticides: Section B (Specifications) warrants that pesticides complying with these specifications are suitable for the control of any given pest or for use in any particular area.

Furthermore, the preparation and use of pesticides complying with these specifications are not exempt from any safety regulation or other legal or administrative provision applicable thereto. Neither FAO nor any member of the FAO Working Party shall be liable for any injury, loss, damage or prejudice of any kind that may be suffered as a result of the preparation or use of pesticides complying with these specifications.

Additionally, the Working Party wishes to warn users of specifications that improper field mixing and/or application of pesticides can result in either a lowering or complete loss of their efficacy. This holds true even in cases where such pesticides comply with the specifications indicated.

Accordingly, the Working Party and/or FAO can accept no responsibility for the consequences of improper field mixing and/or application.

INTRODUCTION

From time to time, FAO publishes booklets of specifications for technical materials and related formulations of plant protection products. Revisions of and additions to already published specifications will be issued when necessary, but during the interval between editions, revisions may be printed in the FAO Plant Protection Bulletin.

FAO specifications and relevant methods of analysis[1] contained herein have been carefully reviewed and agreed by the FAO Working Party of Experts on the Official Control of Pesticides: Section B (Specifications) after consultations with official government scientists, the pesticides industry through GIFAP (Groupement International des Associations Nationales de Fabricants de Pesticides), and, where appropriate, with individual manufacturers.

Specifications are published either as FAO Specifications (i.e., acceptable on the basis of evidence presented), or FAO Provisional Specifications (i.e., usable, but requiring further work[2]).

1/ Methods of analysis and miscellaneous techniques referred to in these specifications have been developed and adopted by CIPAC (Collaborative International Pesticides Analytical Council Ltd.). See CIPAC Handbook Volume I (1970) and Volume IA (1971). W. Heffer & Sons Ltd., Cambridge, United Kingdom. Relevant references to specific methods in the Handbook are given in brackets in the specifications.

2/ For detailed definitions and other essential background information on basic procedures and technical principles adopted by the FAO Working Party of Experts on the Official Control of Pesticides: Section B (Specifications), see "Manual on the Use of FAO Specifications for Plant Protection Products", FAO, Rome, 1971. FAO Agricultural Development Paper No. 93.

The clauses of the specifications are divided into "requirements" and "information", the latter being indicated in the individual specifications by an asterisk. The information clauses provide the buyer with additional safeguards by indicating potential difficulties for which a definite requirement is not yet practicable.

Where applicable, standards for apparatus and common names for pesticides are those approved by the International Standards Organization (ISO).

For solids, liquid active ingredients, volatile liquids (maximum boiling point 50°C) and viscous liquids (lower limit 1 000 cP at 20°C) the FAO specifications are based on percentage weight/weight expression of content. But for other liquids, the content of active ingredient of the product is based on a declaration of grammes/litre at 20°C and/or percent weight/weight.

However, by agreement between those using a particular specification, the content of active ingredient may be supplied in grammes/litre at 20°C and/or weight/weight units. For the purpose of contrasting different tenders for appropriate liquids, it might be more suitable for the buyer to request the content of active ingredient in grammes/litre at 20°C. Finally, in cases of dispute, where grammes/litre at 20°C and weight/weight units are both required and are not appropriately related, the weight/weight figure shall be agreed as the accepted figure.

Allowable variations in analytical results (i.e., tolerances in content of active ingredient) with respect to specific pesticide consignments are intended to cover reasonable variations in content of active ingredient during manufacture and also to compensate for possible inaccuracies in relevant methods of analysis. For examples of such permitted tolerances, see document mentioned in footnote 2/ on page 2.

PARATHION TECHNICAL

FAO Specification Code 10.b/1/S/3

.1 DESCRIPTION

The material shall consist, essentially, of parathion and shall be a liquid, free from extraneous materials or added modifying agents.

.2 ACTIVE INGREDIENT

.2.1 Parathion (See CIPAC Handbook I, p. 551, section 1.2)

The parathion content (%w/w) shall be declared (minimum: 95%) and, when determined, the percentage obtained shall not differ from that declared by more than ±2 percentage units.

.2.2 Identity (Ibid, p. 555, section 1.3)

To be determined by thin layer chromatography.

.3 IMPURITIES

.3.1 Acidity (Ibid, p. 555, section 1.4)

Maximum acidity: 0.3%, calculated as H_2SO_4.

.3.2 Material Insoluble in Acetone (Ibid, p. 555, section 1.5)

Maximum: 0.1%.

.3.3 Free p-Nitrophenol and p-Nitrophenol from easily hydrolysed Impurities (Ibid, p. 553, section 1.2(b))

Maximum: 1.0% (calculated as p-nitrophenol).

.3.4 Water (Ibid, p. 556, section 1.6).

Maximum: 0.2%