AMENDMENTS TO THE SECOND REVISION OF THE FIRST EDITION OF THE MANUAL ON DEVELOPMENT AND USE OF FAO AND WHO SPECIFICATIONS FOR PESTICIDES

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P.21	A. 10.1. WHO classification by hazard	A.10.1 WHO classification by hazard, where these exist.	JMPS 2011 Closed Meeting
P.30	3.3 Extension of LN specifications 3.3.1 Minimum requirements for assessing the equivalence of LN (iv) The manufacturer must provide data to show the applicability of the existing clauses and tests for active ingredient retention/release index in washing and storage stability. Typical data requirements are to show: (a) the stability of active ingredient content over ranges of storage test temperature and time which encompass the values given in the existing specification; and (b) the stability of retention/release* index over ranges of storage test temperature and time which encompass the values given in the existing specification; and (c) either the retention* index over range of surfactant concentrations encompassing that required for the test in the existing specification, or the release* index over a range of heating temperatures encompassing that required for the test in the existing specification [to be removed or amended when CIPAC wash method is adopted]	3.3 Extension of LN specifications 3.3.1 Minimum requirements for assessing the equivalence of LN (iv) The manufacturer must provide original data to show that the LN complies with the WHO specification of the LN reference product (existing specification). Typical data requirements are to show that: (a) active ingredient content (and synergist if present) is within the target range given in the existing specification (mean a.i. content from LNs representative of batch production). (b) isomer ratio, content of synergist and by-products of manufacture or storage (if required) are within the ranges given in the existing specification; (c) wash resistance index of active ingredient and synergist (if present) is within the range given in the existing specification; (d) mesh size, dimensional stability to washing and bursting strength are within the limits given in the existing specification; (e) LN is stable at elevated temperature, i.e. complies with the existing clauses and tests for active ingredient content, isomer ratio (if required), wash resistance index, by-products of manufacture or storage (if required), dimensional stability and	JMPS 2012 Closed Meeting

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		bursting strength over ranges of storage test temperature and time which encompass the values given in the existing specification.	
P.44	4.3.5 Rate of release, or release/retention index, of active ingredient Requirement: General limits cannot be given. LN: minimum 90% retention of active ingredient per wash	4.3.5 Rate of release, or release/retention index, of active ingredient Requirement: General limits cannot be given. ~~LN: minimum 90% retention of active ingredient per wash~~	JMPS 2012 Closed Meeting
P.44 P.203 P.204	For LN Retention/release index	Wash resistance index	JMPS 2012 Closed Meeting
P.45	"Free" active ingredient Method Appropriate test method not available for CG. For CS, CIPAC has adopted the MT methods 188 and 189 (free parathion-methyl, free-lambda-cyhalothrin).	"Free" active ingredient Method Appropriate test methods need to be available. For parathion-methyl CS formulations and lambda-cyhalothrin CS formulations, CIPAC has adopted the MT methods 188 and 189.	JMPS 2011 Closed Meeting
P.48	Methods MT 76 triethanolamine insoluble material;	Methods MT 76 triethanolamine insoluble material [1] [1] MT 76 is no longer supported and should not be used with new specification proposals, but remains valid in support of existing specifications.	JMPS 2012 Closed Meeting
P.49	Bulk density Methods MT 169 Tap density of water dispersible granules (WG);	Bulk density Methods MT 169 Tap density of water dispersible granules (WG) [1]; [1] MT 169 is no longer supported and should not be used with	JMPS 2012 Closed Meeting

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		new specification proposals, but remains valid in support of existing specifications.	
P.52	MT 185 (Wet sieve test) Applicability Wettable powders (WP); suspension concentrates including those for seed treatment and oil-based (SC, FS and OD); water dispersible granules (WG); aqueous capsule suspensions (CS); dispersible concentrates (DC); suspo-emulsions (SE); water-soluble and dispersible tablets (ST and WT); and emulsifiable granules and powders (EG and EP).	MT185 (Wet sieve test) Applicability Wettable powders (WP); suspension concentrates including those for seed treatment and oil-based (SC, FS and OD); water dispersible powders for slurry seed treatment (WS), water dispersible granules (WG); aqueous capsule suspensions (CS); dispersible concentrates (DC); suspo-emulsions (SE); water-soluble and dispersible tablets (ST and WT); and emulsifiable granules and powders (EG and EP).	JMPS 2011 Closed Meeting
P.52	Dry sieve test Applicability Powders and granules intended for direct application. Methods MT 59.1 Dustable powders (DP); MT 58 Granular formulations (GR); 1 MT 59.3 is no longer supported and should not be used with new specification proposals, but remains valid in support of existing specifications.	Dry sieve test Applicability Powders and granules intended for direct application Methods MT 59.1 Dustable powders (DP)[1]; MT 58 Granular formulations (GR)[1]; 1 MT 59.1 and MT 58 are no longer supported and should not be used with new specification proposals, but remains valid in support of existing specifications.	JMPS 2011 Closed Meeting

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P.53	Nominal size range Methods MT 59.2 (MT 58) Sieve analysis.	Nominal size range Methods MT 59.2 (MT 58) [1] Sieve analysis. MT 170 Dry sieve analysis of water dispersible granules (WG). [1] MT 59.2 and MT 58 are no longer supported and should not be used with new specification proposals, but remains valid in support of existing specifications.	JMPS 2012 Closed Meeting
P.53 P.79 P.93 P.100 P.113 P.222	Dustiness Requirement The formulation shall be “nearly dust free” or “essentially non-dusty”, as defined by method MT 171.	Dustiness Requirement The formulation shall have a maximum collected dust of 30 mg by the gravimetric method or a maximum dust factor of 25 by the optical method. ~~be “nearly dust free” or “essentially non-dusty”, as defined by method MT 171.~~	JMPS 2012 Closed Meeting
P.56	Dispersibility and spontaneity of dispersion Requirement General limits cannot be given.	Dispersibility and spontaneity of dispersion Requirement ~~General limits cannot be given.~~ For suspension concentrates, aqueous capsule suspensions and water dispersible granules, normally at least 60% of the active ingredient shall remain in dispersion.	JMPS 2012 Closed Meeting
P.58, 100, 103, 135, 159, 163, 173, 178	MT 180 (Dispersion stability of suspo-emulsions) Requirement: 30 ± 2 °C (unless other temperatures are required)	Requirement: 25 ± 5 °C ~~(unless other temperatures are required)~~	JMPS 2011 Closed Meeting
P.58	Emulsion stability and re-emulsification Applicability Emulsifiable concentrates (EC), emulsion, oil in water (EW) and microemulsions (ME).	Emulsion stability and re-emulsification Applicability Emulsifiable concentrates (EC), emulsion, oil in water (EW), emulsions for seed treatment (ES) and microemulsions (ME).	JMPS 2011 Closed Meeting

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P.60	Pourability Requirement Maximum "residue": ….. %.	Pourability Requirement Maximum "residue": 5%.	JMPS 2012 Closed Meeting
P.60	MT 172 Flowability of water dispersible granules after heat test under pressure.	MT 172.1 Flowability of granular preparations after accelerated storage under pressure.	JMPS 2011 Closed Meeting
P.61	Methods MT 31 Free acidity or alkalinity1 1 MT 31 is no longer supported and should not be used with new specification proposals, but remains valid in support of existing specifications.	Methods MT 31 Free acidity or alkalinity[1] [1] ~~MT 31 is no longer supported and should not be used with new specification proposals, but remains valid in support of existing specifications.~~	JMPS 2012 Closed Meeting
P.62	Degree of dissolution and/or solution stability Requirement General limits cannot be given.	Degree of dissolution and/or solution stability Requirement ~~General limits cannot be given.~~ Maximum 2% retained on a 75 µm test sieve.	JMPS 2012 Closed Meeting
P.62, P.121, P.124	MT 41 (Dilution stability of aqueous solutions)	MT 41.1 (Dilution stability of aqueous solutions)	JMPS 2011 Closed Meeting
P.69	5.1.4.1 (Note 3)	5.1.4.1 (Note 3 & 4)	JMPS 2011 Closed Meeting
P.73 & P.79 & P.92 & P.96 & P.117	Relevant impurities 6.13.3.2 Water (MT 30.5)	Relevant impurities 6.13.3.2 Water (MT 30.5), if required	JMPS 2011 Closed Meeting

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P.74 and P.76	Dry sieve test (MT 59.1)	Dry sieve test (MT 170) *incl. update of Note 4 (P.74) and Note 5 (P.77)*	JMPS 2012 Closed Meeting
P.79	Nominal size range (MT58)	Nominal size range (MT170)	JMPS 2011 Closed Meeting
P.79 & P.93 & P.113 & P.222	MT 171 (Dustiness) Essentially non-dusty.	MT 171 (Dustiness) "nearly dust free" or "essentially non-dusty".	JMPS 2011 Closed Meeting
P.85	6.11.4.3 Suspensibility In the case of water soluble bag packaging, the provisions of clause 6.11.6.4 should be applied.	6.11.4.3 Suspensibility In the case of water soluble bag packaging, the provisions of clause 6.11.6.2 should be applied.	JMPS 2012 Closed Meeting
P.85 and 86	MT 184 Suspensibility Note 6 This test will normally only be carried out after the heat stability test 6.11.5.1.	Deletion	JMPS 2011 Closed Meeting
P.86 & P.93 & P.106 & P.113	Storage stability - by-products of manufacture or storage, - acidity/alkalinity/pH range, - wet sieve test, - dissolution of the bag, - suspensibility,	Storage stability - by-products of manufacture or storage, - acidity/alkalinity/pH range, - wet sieve test, - dissolution of the bag, - suspensibility, - persistent foam (only WP-SB, WG-SB SP-SB and SG-SB products)	JMPS 2011 Closed Meeting
P.91 & P.112	Description The formulation shall be dry, free flowing, essentially non-dusty, and free from visible extraneous matter and hard lumps.	Description The formulation shall be dry, free flowing, nearly dust free or essentially non-dusty, and free from visible extraneous matter and hard lumps.	JMPS 2011 Closed Meeting

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P.92	6.13.4.5 Suspensibility In the case of water soluble bag packaging, the provisions of clause 6.13.6.3 should be applied.	6.13.4.5 Suspensibility In the case of water soluble bag packaging, the provisions of clause 6.13.6.2 should be applied.	JMPS 2012 Closed Meeting
P.93, P95 (note 13), P100, P101, P.113 & P.115	MT 172	MT 172.1	JMPS 2011 Closed Meeting
P.98	To determine tablet integrity (6.14.4.6), disintegration time (6.14.4.2), or storage stability (6.14.5.1), the tablet(s) must not be broken for the purpose, prior to the test.	To determine tablet integrity (6.14.4.6), disintegration time (6.14.4.2), degree of attrition (6.14.4.7) or storage stability (6.14.5.1), the tablet(s) must not be broken for the purpose, prior to the test.	JMPS 2011 Closed Meeting
P.102	Introduction Water emulsifiable powders are treated in a similar fashion to water dispersible powders (WP), emulsifiable granules (EG) and emulsifiable concentrates (EC), as they disperse and emulsify on dilution in water.	Introduction Water emulsifiable powders are treated in a similar fashion to wettable powders (WP), emulsifiable granules (EG) and emulsifiable concentrates (EC), as they disperse and emulsify on dilution in water.	JMPS 2011 Closed Meeting
P.106 & P.113	Persistent foam If required,	Persistent foam (Deletion of if required)	JMPS 2011 Closed Meeting
P.108	Note 12 It shall be used to carry out the dissolution test (6.21.6.1). Aliquots of an aqueous solution of the bag material shall be used in the suspensibility (6.21.6.2) and persistent foam (6.21.6.3) tests.	Note 12 It shall be used to carry out the dissolution test (6.21.6.1). Aliquots of an aqueous solution of the bag material shall be used in the degree of dissolution and solution stability (6.21.6.2) and persistent foam (6.21.6.3) tests.	JMPS 2011 Closed Meeting
P.110	6.22.3.2 Insolubles	delete 6.22.3.2	JMPS 2011 Closed Meeting

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P.118	To determine: - tablet integrity, - disintegration time, - degree of dissolution / solution stability, - storage stability, the tablet(s) must not be broken for the purpose, prior to the test.	To determine: - tablet integrity, - disintegration time, - degree of dissolution / solution stability, - wet sieve test, - Degree of attrition, - storage stability, the tablet(s) must not be broken for the purpose, prior to the test.	JMPS 2011 Closed Meeting
P.121, P.124	Solution stability (MT 41) 7.1.4.2: for 18 h; 45 µm 7.2.4.2: for 18 h; 45 µm	Solution stability (MT 41.1) 7.1.4.2: for 24 h; 75 µm 7.2.4.2: for 24 h; 75 µm	JMPS 2011 Closed Meeting
P.124/125	Solution stability (MT41) (Note 7) Note 7 Only applied to water miscible solutions.	Deletion of Note 7	JMPS 2011 Closed Meeting
P.129	Viscosity, if required (MT192)	Viscosity, if required (MT192 or MT22)	JMPS 2011 Closed Meeting
P.129	7.4.5.1 Stability at 0℃ (MT 39.3) After storage at 0 ± 2℃ for 7 days, the volume of solid and/or liquid which separates shall not be more than 0.3 ml (Note 5). 7.4.5.2 Stability at elevated temperature (MT 46.3) After storage at 54 ± 2℃ for 14 days (Note 6), the determined average active ingredient content must not be lower than .....% relative to the determined average content found before storage (Note 7) and the formulation shall continue to comply with the clauses for:	7.4.5.1 Stability at 0℃ (MT 39.3) After storage at 0 ± 2℃ for 7 days, the volume of solid and/or liquid which separates shall not be more than 0.3 ml (Note 6). 7.4.5.2 Stability at elevated temperature (MT 46.3) After storage at 54 ± 2℃ for 14 days (Note 7), the determined average active ingredient content must not be lower than .....% relative to the determined average content found before storage (Note 8) and the formulation shall continue to comply with the clauses for:	JMPS 2011 Closed Meeting
P.131 P 182	Water (MT 30.5) (Note 4)	Water (MT 30.5) (Note 4), if required	JMPS 2011 Closed Meeting
P.141 & P.151	MT 47.2 (Persistent foam)	MT 47.2 (Persistent foam), if required	JMPS 2011 Closed Meeting
P.149	Particle size distribution (MT 187), if required	Particle size distribution (MT 187), if required	JMPS 2012 Closed Meeting

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P.153 P.157 P.161 P.169 P.174 P.180	…% of particles shall be in the range … to … (Note 10) Note 10 Percentages may be specified in one or more ranges, as appropriate to the product.	…% of particles shall be in the range … to … (Note 10) Note 10 Percentages may be specified in one or more ranges, as appropriate to the product. Laser diffraction may not be suitable to measure the particle size distribution of liquid formulations. This should be evaluated by 4.5.31 Wet sieve test and 4.5.43 Suspensibility or 4.5.44 Dispersion stability.	
P.162 & P.166 & P.171 & P.176	Information about other properties may also be given, e.g. mass per milliliter and flash point (if relevant), but these parameters do not normally constitute essential parts of the specification.	Information about other properties may also be given, e.g. mass per milliliter (if relevant), but these parameters do not normally constitute essential parts of the specification.	JMPS 2011 Closed Meeting
P.164	MT 39.3 (Stability at 0℃) - acidity/alkalinity/pH range, - dispersion stability, - wet sieve test,	MT 39.3 (Stability at 0℃) - dispersion stability, - wet sieve test,	JMPS 2011 Closed Meeting
P.201	8.21 LONG-LASTING INSECTICIDAL NETS OR NETTING (LN), draft guideline Introduction	8.21 LONG-LASTING INSECTICIDAL NETS OR NETTING (LN), draft guideline Introduction Netting refers to an open mesh fabric, whereas net refers to a ready-to-use product made from the netting. LNs (Basic LNs) LNs are long-lasting insecticidal nettings and nets (consisting of mono- or multi- filament fibres) with one or more active ingredients incorporated into the filaments, or coated onto the surface of the filaments. Each LN is designated as incorporated LN or coated LN. In some cases, one or more synergists may be co-formulated.	JMPS 2012 Closed Meeting

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		Combination LNs Combination LNs are long-lasting insecticidal nets made of different types of netting material, such as coated and incorporated and/or netting material, with separate parts treated with different active ingredients. An almost unlimited number of combinations are possible.	
P.202	The clause for bursting strength provides indirect control of the mass of net/m2.	Deletion	JMPS 2012 Closed Meeting
P.205	Note 7 For the purposes of chemical analysis, the analytical method and the number and size of test portions analyzed should be designed to provide results with a relative standard deviation (RSD) ≤5%.	Note 7 For the purposes of chemical analysis, the analytical method and the number and size of test portions analyzed should be designed to provide results with a relative standard deviation (RSD) ≤5% or as applicable in certain justifiable cases.	JMPS 2012 Closed Meeting
P.247	7.2.2 PARTICULATE SOLIDS (DUSTS, DISPERSIBLE POWDERS, WATER DISPERSIBLE GRANULES, GRANULAR FORMULATIONS) Where applicable, CIPAC methods MT 58.1 and MT 166, should be used for sampling solids.	7.2.2 PARTICULATE SOLIDS (DUSTS, DISPERSIBLE POWDERS, WATER DISPERSIBLE GRANULES, GRANULAR FORMULATIONS) Where applicable, CIPAC method~~s MT 58.1 and~~ MT 166, should be used for sampling solids.	JMPS 2012 Closed Meeting
P.260	Suspo-emulsion A fluid, heterogeneous formulation consisting of a stable dispersion of active ingredients in the form of solid particles and fine globules in a continuous water phase.	Suspo-emulsion A fluid, heterogeneous formulation consisting of a stable dispersion of active ingredient(s) in the form of solid particles and of water-non miscible fine globules in a continuous water phase.	JMPS 2012 Closed Meeting