

WHO Prequalification of Vector Control Products

Glossary of terms

Term	Definition
Active ingredient (AI)	Any formulant included in the composition of the ITN intended to impart a pesticidal effect or any synergist/adjuvant included to increase the exposure of the AI to the target vector or enhance the toxicity of the AI to the target vector.
Artificial ageing	A process designed to simulate operational ageing, either as whole constructed insecticide-treated nets (ITNs) or cut samples. Most commonly performed by washing and cutting of holes to simulate damage.
Batch	<ol style="list-style-type: none"> 1. A defined quantity of material produced in a single series of operations. 2. A specific quantity or lot of a test item or reference item produced during a defined cycle of manufacture in such a way that it could be expected to be of a uniform character and should be designated as such.
Bednet	Also referred to as a mosquito net, a net which can be hung over a sleeping area in such a manner so as to allow for one or more people to sleep within the net and thereby be protected from mosquito by means of a physical barrier (at a minimum).
Binder	Formulant used in the coating of ITNs to enable adherence of the AI(s) and establishment of the reservoir.
Bioassay	Laboratory or semi-field tests that use live insect vectors as the test system.
Coated ITN	Multi-filament polyester yarn coated with active ingredient(s) by means of chemical binding agents on the knitted netting material.
Community protection	The potential impact of ITN use in a community which reduces disease transmission rates across a community for those who use an ITN or not.
Community study	Study that evaluates the performance of ITNs in operational settings, typically households.
Construction	Describes the assemblage of fabrics which constitutes the final form of the ITN, considering the potential for identical or different fabrics to be integrated into the final form, as well as methods/materials used for sewing.

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Distribution	The process of transferring ITNs to the user. Mass distribution campaigns, community-based distribution, or sale in local commerce are various methods of distribution.
Dose	The total amount of AI which is applied to the yarn or fabric during treatment.
Efficacy	Product performance that characterizes how a product performs the intended function. Ability of a product to perform the claims made on the label.
Entomological efficacy	Effect of a product on the target vector species when using free-flying mosquitoes.
Fabric	Finished knitted yarn which is used in the construction of a finished bednet.
Factory-treatment	Insecticidal treatment of an ITN during the manufacturing process prior to sale/distribution of the product.
Filament	A manufactured fiber of indefinite length (continuous), extruded from the spinneret during the production process.
Formulant	Any substance, other than a technical grade active ingredient, intentionally incorporated in a formulation.
Formulation	The combination of various ingredients designed to render the product useful and effective for the purpose claimed and for the envisaged mode of application.
Homogeneous ITN	A constructed ITN in which only one fabric is used.
Impregnated	May be used to refer to both ITN treatment types: coating and incorporation.
Incorporated yarn	Mono-filament polyethylene yarn with integrated active ingredient(s) used as the yarn for knitting the netting material.
Insecticide-treated net (ITN)	Bednets which contain an AI(s) which is intended to repel, kill, or mitigate the target vector so as to enhance the personal protection of the bednet, even in the case of damage to the net in the form of holes, as well as impart community protection through impacts on mosquito population, biting rates, and even sporozoite infection rates.
Lot	Part, or all of, a consignment that may comprise part or all of one manufacturing batch.
Masterbatch	A formulated intermediate containing active ingredient or other formulants which is used in the formulation of the final product.
Method	A systematic procedure or technique to accomplish the collection and/or analysis of data.
Method of application	The means by which the fabric is treated with AI, generally incorporation in polyethylene or coating of polyester.

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Method validation	Process used to determine the suitability of a given method for its intended purpose.
Mosaic ITN	A constructed ITN in which more than one fabric is used to form the final product.
Nominal quantity	The amount of an ingredient which is expected to be present in a typical sample of a product at the time the product is produced, expressed as mg/g, g/kg, or a percentage by weight.
Operational ageing	The preparation of ITN test samples in real world conditions and use.
Personal protection	The potential impact of a bednet, treated or untreated, which reduces biting of mosquitoes to those individuals using the product.
Preferred product characteristics (PPCs)	Communicates the desired product performance and the operational characteristics of the product that address an unmet public health need. PPCs are linked to TPP (Target Product Profile).
Product	The formulated product (active ingredient(s) and co-formulants), in the form in which it is packaged and sold.
Product panels or panel	A definable section of an ITN which may include roof, sides, or other design feature.
Product testing	Targeted testing and analysis of production batches to ensure that the product aligns with the declared characteristics.
Quality assurance	A range of activities that enable laboratories to achieve and maintain high levels of accuracy and proficiency despite potential issues related to production methods, test methods, materials, and personnel.
Quality control	Any process that aims to monitor and maintain production standards.
Quality management system (QMS)	A quality management system includes all policies, processes and procedure required to be followed in the production of a given product. A QMS plans, controls, and monitors all elements that have the potential to impact the conduct of laboratory experiments/studies.
Raw data	Data collected directly from a primary source.
Reference item(s)	(Control item) any article used to provide a basis for comparison with the test item or to validate experimental procedures.
Sample preparation	Preparation of test items to investigate how ITN fabrics may change through their life stages, e.g., new, post-storage, end-of-life.
Semi-field study	Study conducted in simulated 'natural' conditions that typically uses whole constructed ITNs with human volunteers and free-flying mosquitoes. Semi-field studies can use open or closed systems.
Specification	Parameters and criteria defining the physical appearance and physical and chemical properties of a product.
Storage	The placement of finished products in a location prior to or after transport in advance of distribution or initiation of use.

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Storage conditions	Location, containment type, and environmental conditions at which an ITN is stored.
Storage stability	The ability for a product to maintain its characteristics and remain fit for purpose during storage.
Study	A detailed investigation and analysis of a subject and situation designed to answer a particular question, e.g., regeneration study.
Test system	The biological organism used for <i>in vivo</i> characterization of the bioavailability of ITN fabrics used in a study.
Toxicity	Inherent property of an agent to cause an adverse biological effect.
Untreated bednet	A bednet which has not been treated with insecticide and, therefore, offers personal protection from mosquito bites.
Uptake	The absorption of insecticide through the legs and sensory head organs when test systems land on treated surfaces.
Useful life	The period over which a product can be used and expected to perform as it should.
Weight of evidence	Method for decision-making in which multiple lines of evidence, often across disciplines, are integrated to determine the support for a scientific question. This approach avoids sole reliance on any one piece of information, line of evidence or indicator.
Wet pick-up (i.e., of the coating suspension)	The amount of fluid by percent weight picked up by the fabric during an application process, i.e., amount of solution picked up by the fabric during the coating of an ITN.
Yarn	The material used to knit netting fabric, may be treated or not at the time of knitting.
Yarn denier	Denier, or linear density, is the value (in grams) of 9000 m of yarn.