

## Indoor Residual Spray - Target Product Profile

Measure	Criteria
<b>FORMULATION AND EFFICACY</b>	
WHO PQ threshold	To demonstrate that next-generation IRS products are non-inferior to the current benchmark in the product class. Meets WHO PQ criteria for IRS.
Field efficacy	Minimum 6 months efficacy on concrete, mud and wood against susceptible resistant strains, ideal is 12 months residual life
Target species	Effective against local resistant strains including <i>Anopheles gambiae</i> s.s., and <i>Anopheles arabiensis</i> . Resistant strains to include: Kdr, Mace, Rdl, Metabolism (oxidative; esterase; GST)
Formulation	Final formulation can be produced in easy to use packaging Formulation stable under local conditions
Other benefits	Demonstrates rapid knock down
<b>MANUFACTURING</b>	
Cost of implementation	Product cost acceptable in DEC
TGA production	Technical specifications of a.i. are defined
Supply chain	Active ingredients are available to the company developing the product. There is a reliable manufacturing process to ensure consistency between batches.
Commerciality	Use rates are commercially acceptable at launch
<b>SAFETY AND REGULATORY</b>	
International standards	All active ingredients used must hold a registration in a major regulatory authority (EPA, EU, Japan) or WHO CAGR approval
WHO PQ	All active ingredients used must pass the WHO PQ risk assessment model for IRS for operator and household safety.
Risk Assessment	Final product passes the WHO PQ Risk assessment for IRS
Toxicology	For all major categories of toxicological importance, risks are understood and considered to be manageable.
Non-target species	Risks to non-target species in line with accepted standards for PHPs at the time of registration submission. It is expected that environmental exposure will be minimal for IRS.
Product chemistry	Manufacturer can satisfy all product chemistry regulatory requirements.
<b>MARKET</b>	
Competitiveness	Product is a competitor for comparable products on the market

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IRM	Product is sustainable and part of a wider insecticide resistance management strategy (e.g. GPIRM) and will be used as part of a rotation and/or a mosaic.
<b>END USER SUITABILITY</b>	
Irritancy and skin sensitization	No classification for irritancy or skin sensitisation
Odour	No unacceptable odour after application
Staining	No staining
Application methods	Formulation capable of application through a compression sprayer with standard nozzles
<b>FREEDOM TO OPERATE</b>	
FTO	Manufacturer has access to all product components, including formulations, and has freedom to manufacture in the intended geography.
Route of synthesis	Manufacturing route of synthesis is well defined and gives commercial robustness.