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Service Report

PGI disaster relief blankets WHO wash durability & bioassay

Order

Analytical evaluation of Permethrin content, before and after 5, 10, 15, 20 and 25 WHO washing cycles and WHO tube tests

Material

Non woven blankets, sage green, delivery from 11/2010

Result

We have checked the wash durability of the Skintex MR III treated PGI disaster relief blankets according to the WHO washing procedure for LLIN.

The wash durability in the WHO washing procedure is very good. After 25 WHO washes the Permethrin concentration is still at 0.73%. The initial Permethrin concentration was 1.14% which corresponds to 1.4 g/m². The target recommendation from WHO is 1.3 g/m²

The bioassay in a WHO tube test showed excellent results. After 25 WHO wash cycles the knock down / dead result wash still 100%.

Details

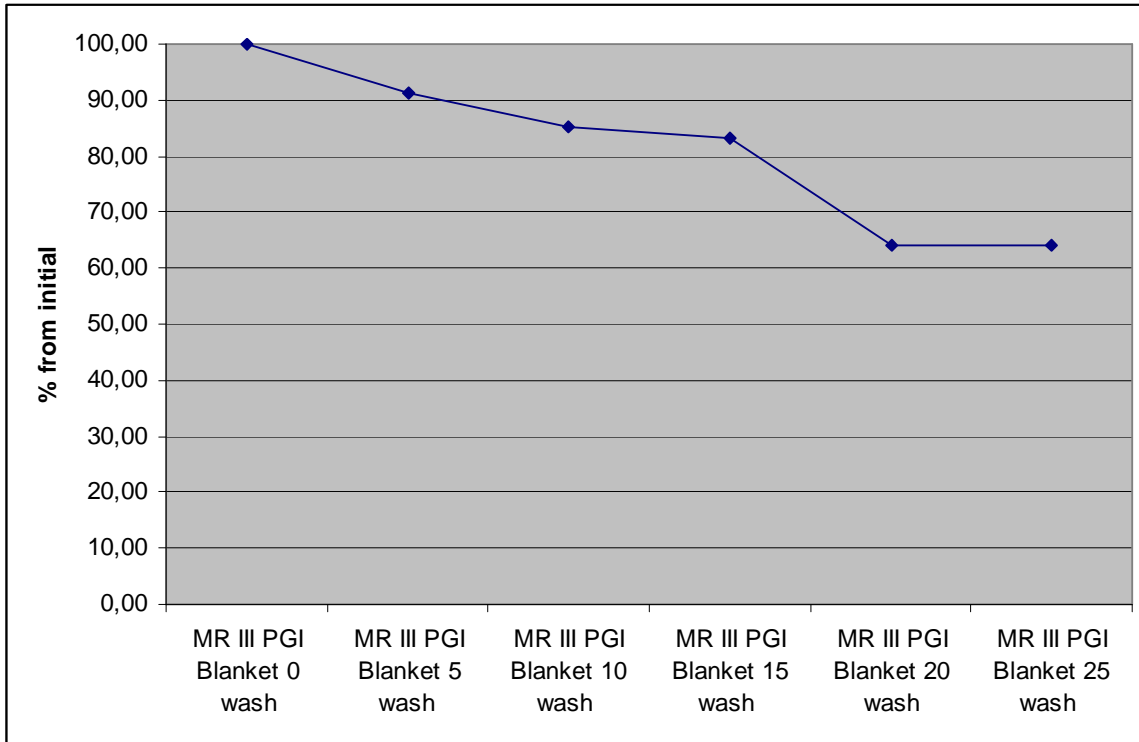
Analytical results by GC-MS, extraction with Acetone/Acetonitrile

WHO washing: As per WHO guideline with 2 g/l Marseiller soap in 500 ml deionized water, 10 min 30°C, 2 x 10 min rinsing. Piece of 25 x 25 cm in 1000 ml beaker, shaking at 155 movements per minute.

	Permethrin content (%)	% from initial
MR III PGI Blanket 0 wash	1.14	100,00
MR III PGI Blanket 5 WHO wash	1.04	91,23
MR III PGI Blanket 10 WHO wash	0.97	85,09
MR III PGI Blanket 15 WHO wash	0.95	83,33
MR III PGI Blanket 20 WHO wash	0.73	64,04
MR III PGI Blanket 25 WHO wash	0.73	64,04



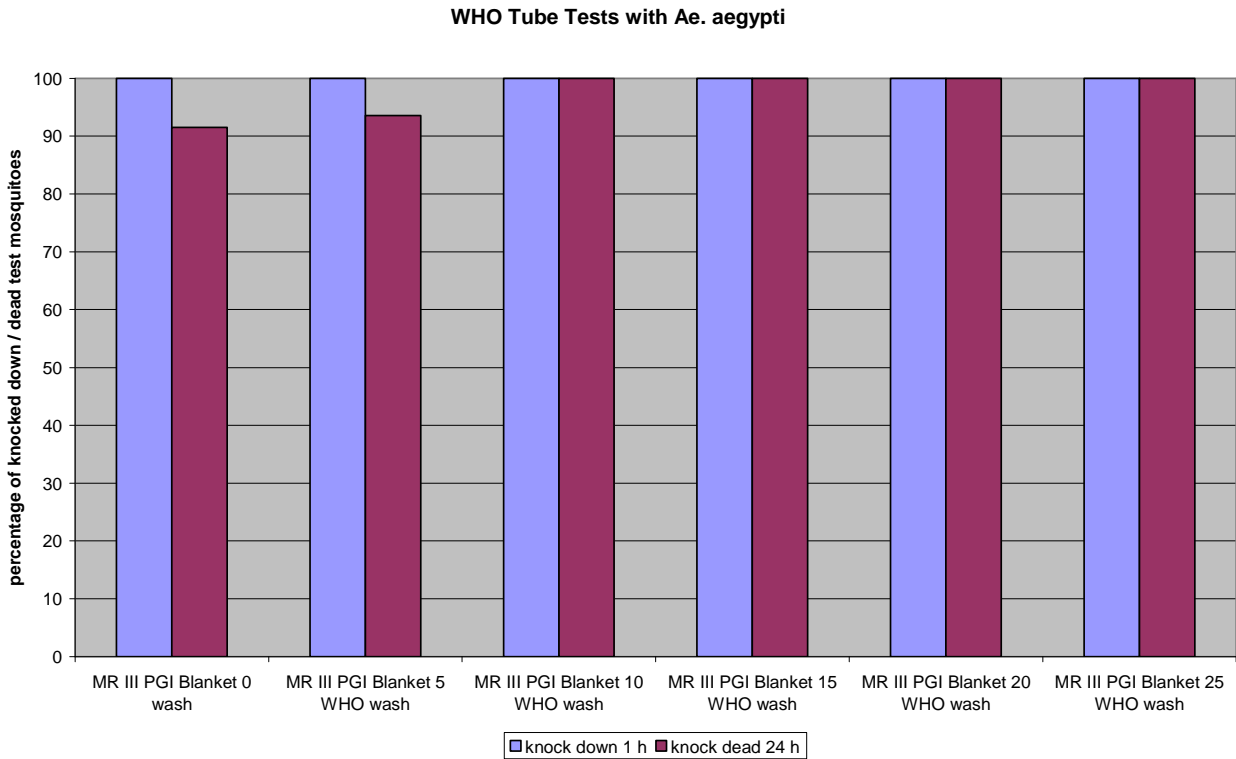
Diagram of wash durability:



WHO Tube test result at test institute Biogents:

	Knock down (1 h) in %	Knock dead (24 h) in %
MR III PGI Blanket 0 wash	100	91,5
MR III PGI Blanket 5 WHO wash	100	93,6
MR III PGI Blanket 10 WHO wash	100	100
MR III PGI Blanket 15 WHO wash	100	100
MR III PGI Blanket 20 WHO wash	100	100
MR III PGI Blanket 25 WHO wash	100	100

Diagram of bioassay:



Kind regards,



Karsten Matz
CT-HCI



Werner Mauer