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Dresden, Sept. 27th, 2018
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Test Report 2117020/2018/01/PCP

Client: Nolte Holzwerkstoff GmbH & Co. KG
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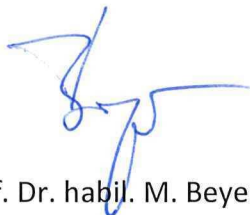
Order No.: SPL-Q9-Q2-20 / 2117020 (old 259013)

Date of order: July 27th, 2018

Order: Testing of 5 samples on Lindane and PCP

Contractor: EPH – Laboratory Chemical Testing

Engineer in charge: Dr. Martin Fischer



Prof. Dr. habil. M. Beyer
Head of laboratory
Chemical testing

The test report contains 3 pages. Any duplication, even in part, requires written permission of EPH. These test results are exclusively related to the tested material.

1 Task and Sample description

On August 30th, 2018, the Entwicklungs- und Prüflabor Holztechnologie GmbH (EPH) received 5 samples that had to be tested on Lindane and PCP.

tab. 1 sample overview; indications of size are given in [mm]

variant	EPH-Code	amount of test pieces	length	width	thick-ness	charge	type	production date
1	K-1-Ü2-1...3	3	500	500	12	SG1-91801	particle board P2 Maxx	16.08.2018
2	K-2-Ü2-1...3	3	500	500	25	SG1-71712	particle board P2 Maxx	11.08.2018
3	K-3-Ü2-1...3	3	500	500	32	SG1-71828	particle board P2 Maxx / X-Maxx	10.08.2018
4	K-PB-2-R3-1	3	450	450	32	32953	Eco Maxx	20.08.2018
5	K-PB-3-R3-1	3	450	450	18	RS1-32988	Eco Maxx	15.08.2018

2 Sample preparation and analysis

Stripes of 2 cm width were cut from each sample which were milled to a particle size of less than 1 mm and mixed for the respective sample. 2 g were weighed exactly, 40 mL toluene and 2 mL 1 M sulfuric acid were added, followed by a 30 min sonication and further shaking for 20 hours. A part of each solution was filtrated, derivatised with acetic anhydride and the PCP was measured with a gas chromatograph using ECD-detection (GC-ECD). Lindane was measured with GC-ECD in another part of each extract. External calibration was performed with calibration standards from commercial sources. Determination limits for PCP and Lindane (2 g of sample): 0.05 mg/kg

3 Results and evaluation

tab. 2 PCP and Lindane in 5 samples, unit of measurement: [mg/kg]

Variant	Sample	PCP	Lindane
1	K-1-Ü2-1...3	0.05	-
2	K-2-Ü2-1...3	0.12	-
3	K-3-Ü2-1...3	0.11	-
4	K-PB-2-R3-1	0.17	-
5	K-PB-3-R3-1	0.10	-


- not determinable

The samples did contain PCP at trace levels but no Lindane. According to the Chemical Prohibition Ordinance (ChemVerbotsV) § 1 (15) the limit value for PCP is 5 mg/kg. According to the IOS MAT 0010 the limit value for PCP is 3 mg/kg and the limit for Lindane is 1 mg/kg. The tested chipboards comply these limits. According to EN 13986 (2005-03), p. 28, item 5.18, the product should be labeled accordingly at a content of PCP > 5 ppm.

The tested chipboards are not subject to labeling according to EN 13 986 with regard to the contents of PCP and Lindane.

4 Miscellaneous

Remaining material will be stored as a control sample for 3 months in the EPH.



Dr. Martin Fischer
Chemist in charge