

Certificate of Analysis**Canapure**Batch No.: **18R18786**Manufacturing Date: **2018-06**Certificate No.: **18062912010**

Test	Acceptance Criteria	Result
Appearance		
Appearance	white to pale yellow solid	complies
Identity		
IR spectrum	complies with the reference spectrum of Cannabidiol	complies
Identification HPLC	comparable retention times of main peaks in the chromatograms of reference and test solution	complies
Purity		
Sulphated ash / Residue on ignition	$\leq 0,1 \%$	0,01 %
Melting point	65 - 69 °C	68 °C
Specific optical rotation	-132,5 - -129,5	-130,6
Content of water	$\leq 1,0 \%$	0,02 %
Related substances		
(+)-Menthadienol	$\leq 0,15 \%$	$< 0,05 \%$
Olivetolmethylester	$\leq 0,15 \%$	$< 0,05 \%$
Olivetol	$\leq 0,15 \%$	$< 0,05 \%$
Cannabidiolcarboxylic acid methyl ester	$\leq 0,15 \%$	$< 0,05 \%$
Cannabidiol hydroxyethyl ester	$\leq 0,15 \%$	$< 0,05 \%$
Each unspecified single impurity	$\leq 0,10 \%$	$< 0,05 \%$
Sum of THC-derivates	$\leq 0,2 \%$	$< 0,05 \%$
Total amount of impurities	$\leq 2,0 \%$	$< 0,05 \%$
Elemental Impurities		
Boron	$\leq 25 \text{ ppm}$	$< 25 \text{ ppm}$
Vanadium	$\leq 1 \text{ ppm}$	$< 0,1 \text{ ppm}$
Chromium	$\leq 25 \text{ ppm}$	$< 2,5 \text{ ppm}$
Manganese	$\leq 25 \text{ ppm}$	$< 2,5 \text{ ppm}$
Iron	$\leq 25 \text{ ppm}$	$< 5,0 \text{ ppm}$
Cobalt	$\leq 0,5 \text{ ppm}$	$< 0,05 \text{ ppm}$
Nickel	$\leq 2 \text{ ppm}$	$< 0,4 \text{ ppm}$
Copper	$\leq 30 \text{ ppm}$	$< 3,0 \text{ ppm}$
Arsenic	$\leq 1,5 \text{ ppm}$	$< 0,15 \text{ ppm}$
Molybdenum	$\leq 25 \text{ ppm}$	$< 2,5 \text{ ppm}$
Cadmium	$\leq 0,2 \text{ ppm}$	$< 0,02 \text{ ppm}$
Tungsten	$\leq 25 \text{ ppm}$	$< 2,5 \text{ ppm}$
Mercury	$\leq 0,3 \text{ ppm}$	$< 0,03 \text{ ppm}$

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Lead	$\leq 0,5$ ppm	$< 0,05$ ppm
Tin	≤ 25 ppm	$< 2,5$ ppm
Residual solvents		
n-Heptane	≤ 5000 ppm	229 ppm
Diethyl ether	≤ 5000 ppm	< 3 ppm
Toluene	≤ 890 ppm	< 2 ppm
Ethylene glycol	≤ 620 ppm	< 93 ppm
Benzene	≤ 2 ppm	$< 0,1$ ppm
Assay		
Assay (HPLC)	98,0 - 102,0 %	100,2 %

Specification: **IHS (QC SW 0145/03)**Laboratory Registration-No.: **040000004470**Release date: **2018-06-29**

The batch complies in all parameters with the specification.

Retest date: **2019-12-01**

Store the substance tightly closed and protected from light.

**Arevipharma GmbH, Quality Control****Radebeul, 2018-06-29**