



## Specification

Concerning Product:	
Article number	122965439MEP
Trade name / designation / denomination	Methylene Blue, PhEur.
CAS number	122965-43-9
Other names / synonyms	•Azure II; •METHYLENE BLUE; •Methylene Blue; •Methylene Blue Hydrate; •Methylene Blue [Ion association reagent for spectrophotometric analysis]; •Methylene Blue hydrate; •Methylene Blue zinc chloride double salt; •Methylene Blue, w/v aq. soln.; •Methylene blue; •Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride, hydrate (1:1:?)
EC number	602-909-3
Molecular weight [g / mol]	337.867
Formula	C <sub>16</sub> H <sub>20</sub> CIN <sub>3</sub> OS

Parameter	Specification	Unit
<b>Organoleptic test</b>		
Appearance	dark blue or dark green crystalline powder with a metallic sheen, hygroscopic	
<b>Physical parameter</b>		
Loss on drying	8.0 – 24,0	%
<b>Identity</b>		
Assay	93,0 – 102,0	%
Identification	A. IR: The IR spectrum of the sample corresponds to the reference standard	
Identification	B. Chlorides: The filtrate gives reaction (2.3.1a) of chlorides	
<b>Impurities</b>		
Sulphated ash	≤ 0,25	%
Related substances	Impurity A (3-(dimethylamino)-7-(methylamino)phenothiazin-5-ylum) : ≤ 5,0	%
Related substances	Methylene violet ≤ 0,05	%
Related substances	Total of impurities other than A ≤ 0,5	%
Related substances	Unspecified impurities ≤ 0,10	%

<b>Residual Solvents</b>		
Residual solvents	Ethyl acetate: ≤ 5000	ppm
<b>Elemental Impurities</b>		
Aluminium (Al)	≤ 100	ppm
Cadmium (Cd)	≤ 1	ppm
Chromium (Cr)	≤ 100	ppm
Copper (Cu)	≤ 300	ppm
Iron (Fe)	≤ 200	ppm
Mercury (Hg)	≤ 1	ppm
Manganese (Mn)	≤ 10	ppm
Molybdenum (Mo)	≤ 10	ppm
Nickel (Ni)	≤ 10	ppm
Lead (Pb)	≤ 10	ppm
Tin (Sn)	≤ 10	ppm
Zinc (Zn)	≤ 100	ppm
<b>Organic volatile impurities</b>		
Benzene	≤ 2	ppm
Methanol	≤ 3000	
Toluene	≤ 890	ppm
<b>Microbiological data</b>		
Total Plate Count	≤ 100	CFU/g
Yeast and Mould	≤ 100	CFU/g

Chemische Werke Hommel GmbH & Co.KG

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Waltrop, 10. Aug. 2023

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