

Test results

Department
Environmental-
analyses

CUSTOMER Manz CIGS Technology GmbH, 74523 Schwäbisch Hall
 SAMPLE TYPE waste water sample
 SAMPLE TAKEN AT process waste water
 SAMPLE TAKEN ON 13th June 2017
 SAMPLE TAKEN BY Mr Glier, Manz CIGS Technology GmbH
 LOG NO. 235 305 SAMPLE RECEIVED ON 16th June 2017

Parameter	(method / standard)	Measured value	Dimension
Optical appearance	(visual)	orange, almost clear	
Smell	(DEV B 1/2)	strangly	
Sediment	(visual)	many, orange	
pH value at 20°C	(DIN 38404 C 5)	11.6	--
El. conductivity at 25°C	(DIN EN 27888 C 8)	1500	µS/cm
filterable substances	(DIN 38409 H 2-3)	300	mg/l
Dry residue at 105°C	(DIN EN 12880 S 2a)	9000	mg/l
ICP-MS - overview analysis	(DIN EN ISO 17294-2 E 29)	see attachment	mg/l
COD chemical oxygen demand	(DIN 38409 H 41)	7600	mg/l O ₂
BOD biochemical oxygen demand	(DIN EN 1899-1 H 51)	< 10	mg/l O ₂
ammonium nitrogen (FIA)	(DIN EN ISO 11732 E 23)	10700	mg/l N
organically bonded nitrogen	(DIN EN 25663 H 11)	< 0,1	mg/l N
Sulfate	(DIN EN ISO 10304-1 D 20)	310	mg/l SO ₄
Chloride	(DIN EN ISO 10304-1 D 20)	13	mg/l Cl

Note: The test results apply exclusively to the tested sample. It is not permitted to copy this report in whole or in part without the test lab's consent in writing.

Ludwigsburg, 2017-06-30

Dr. Klaus –Peter Lörcher

Page 1 / 1



Dr. rer. nat. Klaus-Peter Lörcher, Diplom-Chemiker
 von der IHK Region Stuttgart öffentlich bestellt und
 vereidigter Sachverständiger für analytische Chemie,
 Wasser-, Abwasser- und Abfallchemie

71636 Ludwigsburg
 Martin-Luther-Straße 26
 Tel. 07141 / 975 70-0
 Fax. 07141 / 975 70-70

Laborzweigstelle:
 74074 Heilbronn
 Charlottenstraße 10
 Tel. 07131/25 64 00

Zugel. Untersuchungsstelle
 nach §19 TrinkwVerordnung
 mail@Loercher.de
 www.Loercher.de