

ISO 22241-1 Quality Characteristics of DEF fluid

LAB CODE: 3U0163UR1

CLIENT CODE: 32.5 DEF

RECEIVED DATE: 06/05/2013

ALT. CODE: N/A

REPORT DATE: 6/11/2013

AR CODE: JN30123A

GRADE: N/A

REQUESTOR: PEDERSEN, R

REF NO.: N/A

CONDUCTED FOR: DEF Products
422 East Barioni Blvd.
Imperial, CA 92251

Test Completion Date	Characteristics	Unit	Limits		Results	Test methods
			min.	max.		
6/6/2013	Urea content	% (m/m)	31,8	33,2	32.6	ISO 22241-2 Annex B 33.1 ISO 22241-2 Annex C 32.1
6/5/2013	Density at 20 °C	kg/m ³	1 087,0	1 093,0	1088.1	ISO 12185
6/5/2013	Refractive index at 20 °C	—	1,381 4	1,384 3	1.3817	ISO 22241-2 Annex C
6/5/2013	Alkalinity as NH ₃	% (m/m)	—	0,2	0.03	ISO 22241-2 Annex D
6/5/2013	Biuret	% (m/m)	—	0,3	0.03	ISO 22241-2 Annex E
6/5/2013	Aldehydes	mg/kg	—	5	<0.5	ISO 22241-2 Annex F
6/5/2013	Insoluble matter	mg/kg	—	20	5.3	ISO 22241-2 Annex G
6/6/2013	Phosphate (PO ₄)	mg/kg	—	0,5	0.12	ISO 22241-2 Annex H
6/6/2013	Calcium	mg/kg	—	0,5	0.1	ISO 22241-2 Annex I
6/6/2013	Iron	mg/kg	—	0,5	<0.1	
6/6/2013	Copper	mg/kg	—	0,2	<0.1	
6/6/2013	Zinc	mg/kg	—	0,2	<0.1	
6/6/2013	Chromium	mg/kg	—	0,2	<0.1	
6/6/2013	Nickel	mg/kg	—	0,2	<0.1	
6/6/2013	Aluminum	mg/kg	—	0,5	<0.1	
6/6/2013	Magnesium	mg/kg	—	0,5	<0.1	
6/6/2013	Sodium	mg/kg	—	0,5	<0.1	
6/6/2013	Potassium	mg/kg	—	0,5	0.2	
6/6/2013	Identity	—	identical to reference		YES	ISO 22241-2 Annex J

In my opinion, the testing on this report was conducted in a valid manner according to the test method listed.

Test results only apply to sample(s) provided. Samples are tested as received from the customer.

Test Deviations: Annex H - H.3.2, Incineration dish used is porcelain.

Remarks:

Joe Franklin
Manager, Analytical Testing

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