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Advancion

Advancion Corporation

CHEMLOG
7 ROUTE DE BUEIL
F-27780 GARENNE SUR EURE

Certificate of Analysis

Product Number 375904
Product Name
TRIS AMINO# AC Ultra Pure USP/EP Grade
Tris(hydroxymethyl)-aminomethane
Delivery No. 80090053 / 000060
Date Shipped 2023-09-26
Shipment No. 86176

Customer Information

Customer Name
CHEMLOG
Customer PO number PO203087270
Customer Product Code
Container ID 28BNL8

Batch Number F100N82U10
Manufacturing Date 2023-08-02
Retest Date 2026-08-01
Quantity 42 DR
Net Weight 1.050,000 KG
Country of Origin Name DE
Manufacturing Plant F100
Manufacturer Address ANGUS Chemie GmbH
Zeppelinstrasse.30
Ibbenbüren 49479

Test	Unit	Lower Limit	Upper Limit	Value
Purity (dried), by GC	WT%	99,90		99,95
Related Substances, by GC	WT%		0,10	0,05
Water	WT%		0,5	0,4
Melting Point (dried)	°C	170,0	172,0	170,1
APHA Color, 20% Aqueous Solution			20	< 5
Loss on Drying, 105C for 3 Hrs	WT%		0,30	0,13
Water Insoluble Matter	WT%		0,005	0,000
Elemental Impurities (Ni) by ICP/MS	ppb		2000	21
Residue on Ignition	WT%		0,05	0,00
Iron				PASS
5 Max ppm				
UV Abs @ 260nm, 10% Aqueous Solution			0,03	0,00
UV Abs @ 280nm, 10% Aqueous Solution			0,02	0,00
UV Abs @ 430nm, 10% Aqueous Solution			0,004	0,000

For inquiries, please contact Customer Service or local Sales
Trademark, Advancion or its subsidiaries, registered in various countries

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Test	Unit	Lower Limit	Upper Limit	Value
UV Abs @ 290nm, 40% Aqueous Solution			0,20	0,01
Identification A (USP)				PASS
Identification B (USP)				PASS
Identification C (USP)				PASS
Melting Range (dried)				PASS
168 - 172 deg C (USP)				
pH, 5% Solution		10,0	11,5	10,9
in CO2 Free H2O (USP)				
Loss on Drying	WT%		1,0	0,1
105C for 3 Hrs (USP)				
Residue on Ignition (USP)	WT%		0,1	0,0
Residual Solvents(USP)				PASS
Assay, by Titration (USP)				PASS
99.0 - 101.0 % wt				

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Test	Unit	Lower Limit	Upper Limit	Value
Identification B, Melting Point (EP)				PASS
168 - 174degC				
Identification C (EP)				PASS
Appearance				PASS
clear & colorless (EP)				
pH, 5% Solution		10,0	11,5	10,9
in CO2 Free H2O (EP)				
Related Substances (EP)				PASS
Chlorides (EP)				PASS
100 Max ppm				
Iron (EP)				PASS
10 ppm max				
Loss on Drying, 105C (EP)	WT%		0,5	0,1
Sulfated Ash (EP)	WT%		0,1	0,0

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Test	Unit	Lower Limit	Upper Limit	Value
Assay, by Titration (EP)				PASS
99.0 - 100.5 % wt				

Electronically signed by
SANDRA JUNGHANEL, QUALITY ASSURANCE MANAGER
Advancion Corporation



Advancion Corporation

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Advancion warrants that at the time of the quality release or subsequent retest date this product conformed to the information contained within this document.

Test Notes:

These tests are performed quarterly:

Elemental Impurities (Ni) by ICP/MS (Advancion 3511)
Iron (Advancion 3100)
Identification B (USP)
Identification C (USP)
Assay (USP)
Identification A (USP)
Identification B (EP)
Identification C (EP)
Related Substances (EP)
Chlorides (EP)
Iron (EP)

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Assay (EP)

Residual Solvents (USP) - Based on knowledge of the manufacturing process and the controlled handling and storage of this material, there is no potential for the Class 1, Class 2, or Class 3 solvents specified in USP and EP 5.4 to be present in this material, with the exception of methanol (Class 2 solvent). Methanol content is controlled to less than 3000 ppm limit requirement with a 0.3 wt % limit on the loss on drying test.