CERTIFICATE OF ANALYSIS

BASELINE® Hydrochloric Acid

1A	PRODUCT NUMBER: S020401 LOT NUMBER: 4214070 ASSAY (HCI, w/w): 34%																
3 Li < 0.05	2A 4 Be < 0.05	average evaporate Nitric Acid	of three alided to drynes d / 2% Hydro	quots subsass. The resu ogen Perox	ampled fron ulting residu ide. Operati	n three sam e is reconst ons are con	iples repres ituted in a s ducted und	sentative of mall volume er Class 100	concentration the lot. The end of SEASTA	e samples a AR™ BASEL ean-room c	are slowly INE® 2% conditions.	3A 5 B < 20	4A	5A	6A	7A	
11 Na < 1	12 Mg < 1								injected int lue is subtra		2B	13 AI < 5					
19 K	20 Ca < 10	21 Sc < 0.05			24 Cr		26 Fe < 5				30 Zn < 1	31 Ga < 0.01		33 As < 1	34 Se < 50		
37 Rb < 0.01	38 Sr < 0.01	39 Y < 0.01	40 Zr < 0.01	41 Nb < 0.01	42 Mo < 0.5	W.	44 Ru < 0.01	45 Rh < 0.01	46 Pd < 0.1	47 Ag < 0.1	48 Cd < 0.05	49 In < 0.01	50 Sn < 1	51 Sb < 0.05	52 Te < 0.1		
55 Cs < 0.01	56 Ba < 0.05	57 La < 0.01	72 Hf < 0.01	73 Ta < 20	74 W < 0.05	75 Re < 0.01			78 Pt < 0.1	79 Au < 1	80 Hg < 20	81 TI < 0.01	82 Pb < 0.05	83 Bi < 0.05			,
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ALL VALUES ARE REPORTED IN PARTS PER TRILLION (PPT)

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(1) (2) (3)	(

(1) Atomic Number

(2) Elemental Symbol

3) Concentration (mean in ppt)

(4) 1 Standard Deviation (N=3)

58 Ce	59 Pr	60 Nd	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
- 13-												
90 Th		92 U										
< 0.01		< 0.01										
	1											



HCI (32 - 35%): Properties

Molar Mass: 36.46g/mol

Density: 1.17 g/ml

Molarity: 11 moles/litre
Normality: 11 moles/litre

Release Date:

August 13, 2014

Expiry Date:

August 13, 2017



Product Integrity:

Based on extensive testing results, SEASTAR CHEMICALS INC have found our products, unopened and sealed, maintain the certified integrity, or product quality, for a minimum of three years under the following conditions:

- Stored at room temperature, maximum range 15°C (59°F) to 25°C (77°F).
- Minimum exposure to light.
- For limited time, storage/transport temperature range 5°C (41°F) to 35°C (95°F)

Upon opening the product, the product's integrity will depend on proper handling and exposure to contaminants. The product has been bottled under CLASS 100 clean room conditions, to maintain the certified quality it should be used under these conditions. Furthermore to reduce trace metal contamination, the inner pack of plastic bags and bottle should be opened under CLASS 100 particle conditions to maintain the integrity of the product. The use of plastic gloves, hair net and a clean room suit is also advised.

Safety:

PRIOR to opening or storing this product be sure to consult the Material Safety Data Sheet (MSDS) Section 7 Handling and Storage to ensure safe storage and handling with regards to this hazardous material. This information must be understood prior to its use or storage.

SAFETY HANDLING NOTES: Consult your MSDS, PRIOR to handling these materials. Use proper safety apparel according to the recommendations of the MSDS. Exposure controls and personal protection should include: a properly functioning fume hood, protection for eyes (safety glasses), hands (chemically compatible gloves), feet (chemically compatible boots) and exposed skin (splash protection and a chemically compatible apron). All of these items must conform to local/regional/national regulatory requirements.

Dr. B. McKelvey QA/QC Manager

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