## CERTIFICATE OF ANALYSIS BASELINE<sup>®</sup> Hydrofluoric Acid

<u>1A</u>	PRODUCT NUMBER: S0205					2 LOT NUMBER: 5217040						ASSAY (HF, w/w): 49%						
<b>3 Li</b> < 0.01	2A <b>4 Be</b> < 0.01	average evaporat Nitric Aci	of three ali ed to dryne id / 2% Hyc	quots subsa ss. The resu Irogen Pero	ampled fron Ilting residu xide. For vo	n three sam e is reconst platile eleme	ples repres ituted in a s ents (indica	sentative of mall volume ited by *), th	concentratio the lot. The of SEASTA	e samples a AR <sup>™</sup> BASEL ples are dil	are slowly INE <sup>®</sup> 2% luted then	3A <b>5 B</b> < 20	4A	5A	6A	7A		
11 Na <1	<b>12 Mg</b> < 0.2		njected into ue is subtra 4B		. Values bel 6B	ow 3 times f	the standard	d deviation ( 8	of the blank	are shown v 1B	with '<', no 2B	<b>13 Al</b> < 2						
19 К < 2	<b>20 Ca</b> < 10	<b>21 Sc</b> < 0.01	22 Ti < 10	<b>23 V</b> < 0.1	<b>24 Cr</b> < 2	<b>25 Mn</b> < 0.1	<b>26 Fe</b> < 2	<b>27 Co</b> < 0.05		29 Cu < 2	30 Zr < 2	<b>31 Ga</b>	<b>32 Ge</b> < 0.05	33 As* < 1	<b>34 Se</b> < 10			
<b>37 Rb</b> < 0.01	<b>38 Sr</b> < 0.05	<b>39 Y</b> < 0.01	<b>40 Zr</b> < 0.5	<b>41 Nb</b> < 0.05	<b>42 Mo</b> < 0.2		<b>44 Ru</b> < 0.01	<b>45 Rh</b> < 0.01	<b>46 Pd</b> < 0.1	<b>47 Ag</b> < 0.01	48 Co < 0.02		<b>50 Sn</b> < 0.5	<b>51 Sb</b> < 0.05	<b>52 Te</b> < 0.01			
<b>55 Cs</b> < 0.01	<b>56 B</b> a < 0.1	<b>57 La</b> < 0.01	<b>72 Hf</b> < 0.01	<b>73 Ta</b> < 0.01	<b>74 W</b> < 20	<b>75 Re</b> < 0.01		i.	<b>78 Pt</b> < 0.1	<b>79 Au</b> < 0.1	<mark>80 Hg</mark> < 20	* 81 TI < 0.01	82 Pb < 0.1	83 Bi < 0.05				
100		1 mar 1 mar 1																

## ALL VALUES ARE REPORTED IN PARTS PER TRILLION (PPT)

(1) (2) (2) Elemental Symbol	<b>58 Ce</b> < 0.01	<b>59 Pr</b> < 0.01	<b>60 Nd</b> < 0.01		<b>62 Sm</b> < 0.01	<b>63 Eu</b> < 0.01	<b>64 Gd</b> < 0.01	<b>65 Tb</b> < 0.01	66 Dy < 0.01	67 Ho < 0.01	68 Er < 0.01	<b>69 Tm</b> < 0.01	 <b>71 Lu</b> < 0.01
(4) (in ppt)	<b>90 Th</b> < 0.01		<b>92 U</b> < 0.01	5	_	4							

Maximum

Specification

100 ppb

Actual

Value (in ppb)

< 50 ppb

HF (47 - 51%): Properties Molar Mass: 20.01g/mol Density: 1.18 g/ml Molarity: 29 moles/litre Normality: 29 moles/litre

BASELINE

Brey Herrin

Analyte

Total Sulphur (S)

Greg Henson QA & RA Manager

**))** (© SEASTAR CHEMICALS

May 30, 2017

May 30, 2020

**Release Date:** 

**Expiry Date:** 



## SEASTAR<sup>™</sup>'s Product Integrity Guidelines:

We have found our products, unopened and sealed, maintain the certified integrity, or product quality, for their stated certification period under the following conditions:

- Store at room temperature, maximum range 15°C (59°F) to 25°C (77°F).
- Avoid exposure to sunlight or ultraviolet light sources.
- Open in a 'particle free' environment. SEASTAR recommends a HEPA or ULPA particle filtered trace metal clean room. Open product should be handled under Class 100 or ISO 5 clean room or better conditions.

Once opened, product integrity will depend on proper handling and exposure to contaminants. To reduce trace metal contamination, the inner pack of plastic bags and bottle should be opened under Class 100 or ISO 5 clean room or better conditions to maintain the integrity of the product. The use of plastic gloves, hair net and a clean room suit is also advised.

## Safety Guidelines:

PRIOR to opening or storing this product be sure to consult the Safety Data Sheet (SDS) to ensure safe storage and handling with regards to this hazardous material. This information must be read and understood prior to use or storage.

SAFETY HANDLING NOTES: Consult the SDS PRIOR to handling this product. Use proper safety apparel according to the recommendations of the SDS. 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.

Bregterin

Greg Henson QA & RA Manager

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