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

IA	PRODUCT NUMBER: S020101						LOT NUMBER: 1216100					ASSAY (HNO <sub>3</sub> , w/w): 70%							
3 Li < 0.2 11 Na < 1	2A <b>4 Be</b> < 0.02 <b>12 Mg</b> < 0.5	average evaporat Nitric Aci For volat	of three ali ted to dryne d / 2% Hydr ile elements	quots subsa ss. The resu ogen Peroxi s (indicated	ampled from Ilting residu de. Operati by *), the ac	n three sam le is reconst ions are con cid samples	nples repres ituted in a s ducted und are diluted t	sentative of mall volume er Class 100 hen directly	concentratio the lot. The of SEASTA or better cl injected inter lue is subtra	e samples a AR <sup>™</sup> BASEL ean-room c o the ICP-N	are slowly INE <sup>®</sup> 2% conditions.	3A 5 B < 10 13 AI < 2	4A	5A	6A	7A			
10 1/		3B	4B	5B	6B	7B	aa =	8		1B	2B								
19 К <1	<b>20 C</b> a < 10	21 Sc < 0.01	22 Ti < 0.2	23 V < 0.01	24 Cr < 0.5	<b>25 M</b> m < 0.05		27 Co < 0.2	28 Ni < 5	29 Cu < 1	<mark>30 Zn</mark> < 5	31 Ga < 0.01	<b>32 G</b> e < 0.05	<b>33 As</b> < 1	<b>34 Se</b> < 1				
<b>37 Rb</b> < 0.01	<b>38 Sr</b> < 0.02	<b>39 Y</b> < 0.01	<b>40 Z</b> r < 0.02	<b>41 №</b> < 0.01	<b>42 M</b> o < 1		<b>44 Ru</b> < 0.02	<b>45 Rh</b> < 0.01	<b>46 Pd</b> < 0.01	<mark>47 Ag</mark> < 0.02		<b>49 In</b> < 0.01	<b>50 Sn</b> < 0.5	<b>51 Sb</b> < 0.02	<b>52 Te</b> < 0.01				
<b>55 Cs</b> < 0.01	<b>56 Ba</b> < 0.2	<b>57 La</b> < 0.01	<b>72 Hf</b> < 0.01	<b>73 Ta</b> < 0.01	<b>74 W</b> < 0.5	<b>75 Re</b> < 0.01			<b>78 Pt</b> < 0.2	79 Au < 1	<b>80 Hg</b> < 20	<mark>81 TI</mark> < 0.01	82 Pb < 0.05	83 Bi < 0.01					
		1.000																	

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

(1) (2) (2) Elemental Symbol (3) (3) Concentration (mean	< 0.01	<b>59 Pr</b> < 0.01	<b>60 Nd</b> < 0.01	L	<b>62 Sm</b> < 0.01	<b>63 Eu</b> < 0.01	<b>64 Gd</b> < 0.02	<b>65 Tb</b> < 0.01	66 Dy < 0.01	67 Ho < 0.01	<b>68 Er</b> < 0.01	<b>69 Tm</b> < 0.01	<b>70 Yb</b> < 0.01	<b>71 Lu</b> < 0.01
(4) in ppt) (4) 1 Standard Deviation (N=3)	90 Th < 0.01		<b>92 U</b> < 0.01			1								

HNO<sub>3</sub> (67 - 70%): Properties Molar Mass: 63.01g/mol Density: 1.41 g/ml Molarity: 16 moles/litre Normality: 16 moles/litre



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Sreg Herran

Greg Henson QA & RA Manager Release Date: Nov Expiry Date: Nov

November 28, 2016 November 28, 2019



## **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.

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Greg Henson QA & RA Manager

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