

**Product Information**  
**AA Calibration Standard Physiological**  
**Order No.: 5.403.151**

**Store frozen (below -15°C)!**

Unfrozen overall up to 5 days at ambient temperature

(This product is not approved for In-Vitro Diagnostic use)

**Lot: Example**

**Exp. Date:**

**Concentration of each component:                      c = 1.00 µmol/ml (+/- 4%)**

**Exceptions:**

<b><u>Component</u></b>	<b><u>Concentration [µmol/ml]</u></b>
Urea	15.00
Cystine	0.500

Changed composition: Due to clinical relevance, the physiological standard from this batch onwards contains Allo-Isoleucine [1µmol/ml] instead of Cystathionine [0.525 µmol/ml].

For a quantitative analysis of Cystathionine, it will be used in the future in AS-Calibration Standard Physiologist Addition (Article No. 5.403.152).

For the differentiation of Allo-Isoleucine and Cystathionine, please use the physiological Addition and modify the separation if necessary, to avoid overlapping of the two amino acids.

Tryptophan slowly decomposes in acidic solution, so the actual concentration may be more or less below the stated value.

**IMPORTANT INFORMATION:** Before use thaw the solution completely and mix thoroughly! Refreeze as soon as possible. Frequent thawing and refreezing should be avoided; instead of this it is recommended to make aliquots of suitable volumes.

To achieve the required concentration dilute with the appropriate dilution buffer.

Biochrom (all instruments): Li-Citrate Sample Loading Buffer, order no. 80-2038-10.

The amino acids Asparagine and Glutamine are not contained since their solution got long term stability just at -70°C or below. It is recommended to use appropriate stock solutions, if necessary freshly produced in each case.

This standard solution contains the following amino acids in 0.1n hydrochloric acid:

Elution sequence according to all BIOCHROM AAA running a physiological separation program (High Resolution or High Performance):

No.	Component	$\frac{M}{[g/mol]}$	No.	Component	$\frac{M}{[g/mol]}$
1	O-Phosphoserine	185.1	19	Allo-Isoleucine	131,2
2	Taurine	125.1	20	Isoleucine	131.2
3	Phosphoethanoamine	141.1	21	Leucine	131.2
4	Urea	60.1	22	Tyrosine	181.2
5	Aspartic Acid	133.1	23	$\beta$ -Alanine	89.1
6	Hydroxyproline	131.1	24	Phenylalanine	165.2
7	Threonine	119.1	25	$\beta$ -Amino-Isobutyric Acid	103.1
8	Serine	105.1	26	$\gamma$ -Amino-n-Butyric Acid	103.1
9	Glutamic Acid	147.1	27	Ammonia (NH <sub>4</sub> <sup>+</sup> )	18.0
10	$\alpha$ -Aminoadipic Acid	161.2	28	Ornithine	132.2
11	Proline	115.1	29	Lysine	146.2
12	Glycine	75.1	30	1-Methyl-Histidine	169.2
13	Alanine	89.1	31	Histidine	155.2
14	Citrulline	175.2	32	Tryptophan	204.2
15	$\alpha$ -Amino-n-Butyric Acid	103.1	33	3-Methyl-Histidine	169.2
16	Valine	117.2	34	Carnosine	226.2
17	Cystine	240.3	35	Arginine	174.2
18	Methionine	149.2			