

TRITON ICP

accuracies and limits of detection



This document is version 1.1 please be sure you have downloaded the most recent version.

This document shows the accuracies and limits of detection of our ICP-OES laboratory.

All shown data is original data, out of the methods, on our ICP-OES which will test the samples we receive.

Additional information to the methods used:

Calibration:

We carry out a full calibration on our ICP-OES every day before testing and after every 30-40 tests.

Also a ICAL is carried out with every calibration.

The calibration settings are very strict and a correlation coefficient worse then 0.995 is not accepted and will cause the system to assess the calibration as flawed.

If this is the case an automatic alert systems will force new calibration

Calibration points can be seen in this document.

ICP-OES and TRITON LAB web-interface :

LOD (LIMITS OF DETECTION) are shown in this document for lowest and highest limits.

in the TRITON LAB web-interface amounts lower then then LOD are shown as 0.

in the TRITON LAB web-interface amounts higher then then LOD are shown as the upper LOD.

LOD (LIMITS OF DETECTION) :

LOD (LIMITS OF DETECTION) are given in sigma 3 by the system automatic.

Standards :

We only use certified standards by certified standard producers.

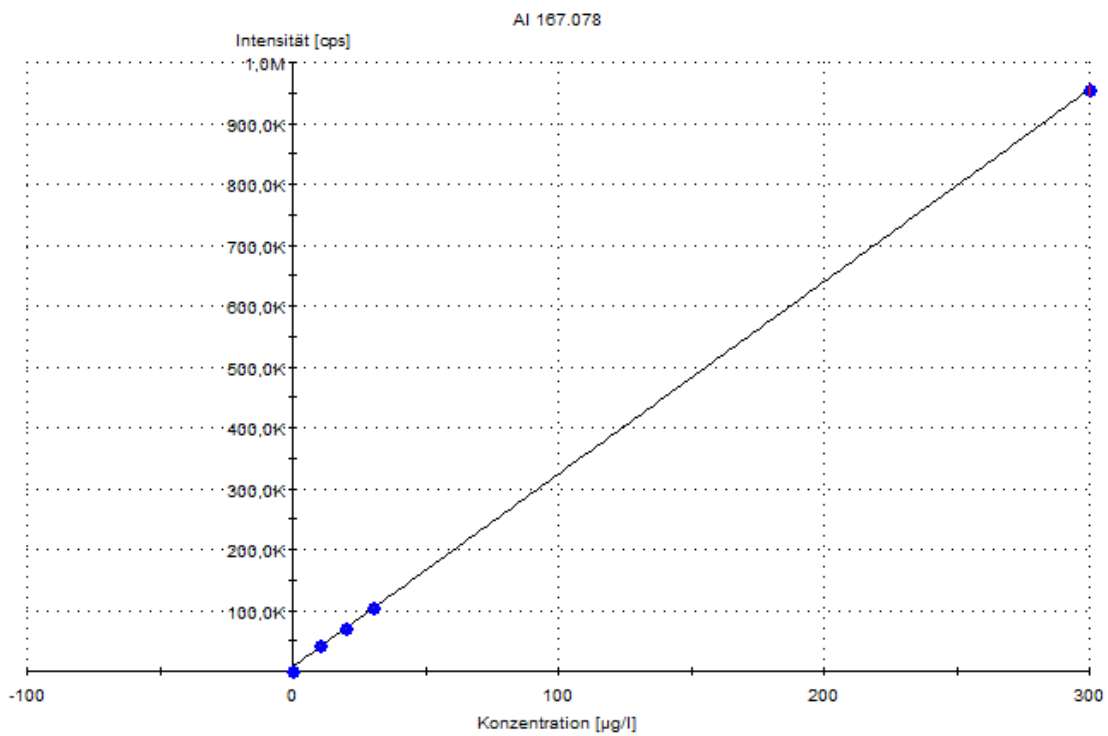
If you have any questions don't hesitate to contact us.

ALUMINIUM / Al

LOD : 0.104 ppb - 0.5 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99995

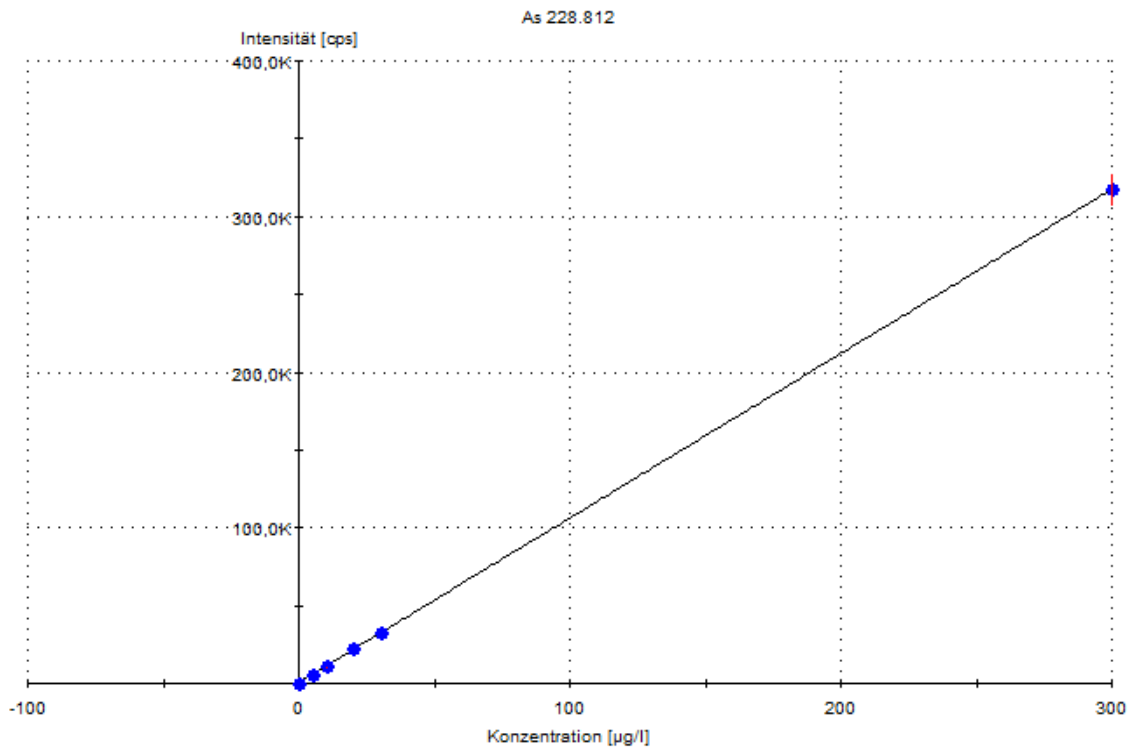


ARSENIC / As

LOD : 0.482 ppb - 0.518 ppb

Calibration MAX : 360

Correlation coefficient : 0.99999

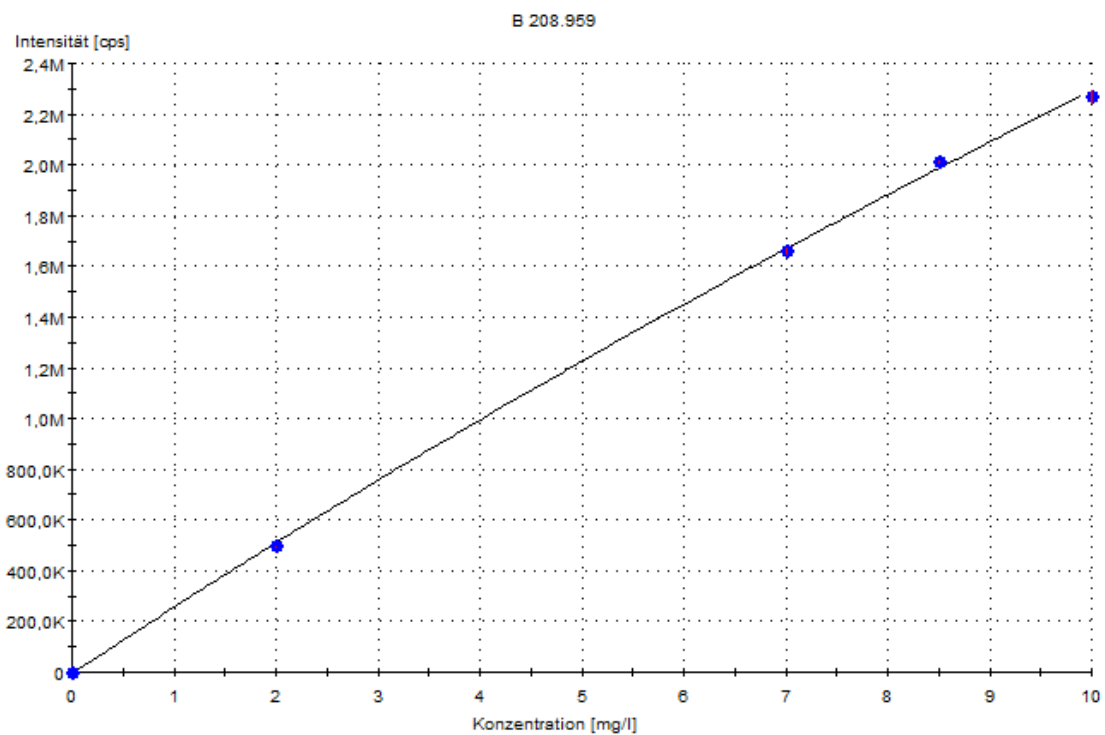


BORON / B

LOD : 0.001 ppm - 0.002 ppm

Calibration MAX : 12 ppm

Correlation coefficient : 0.99977

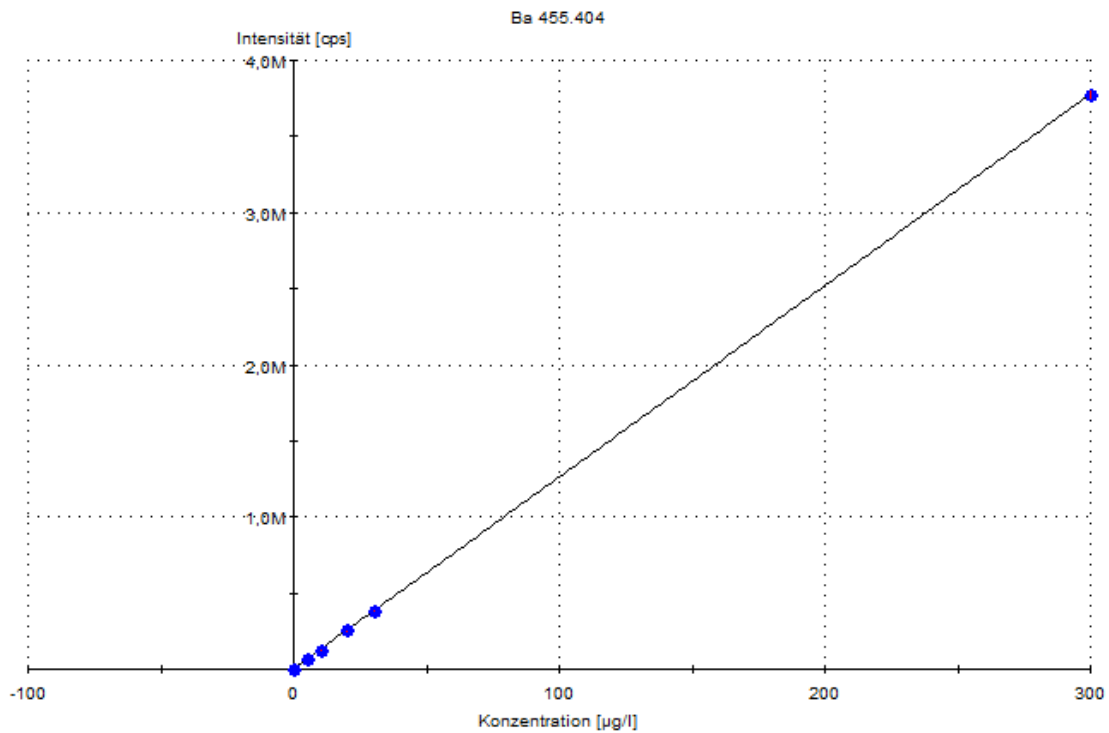


BARIUM / Ba

LOD : 0.126 ppb - 0.3 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

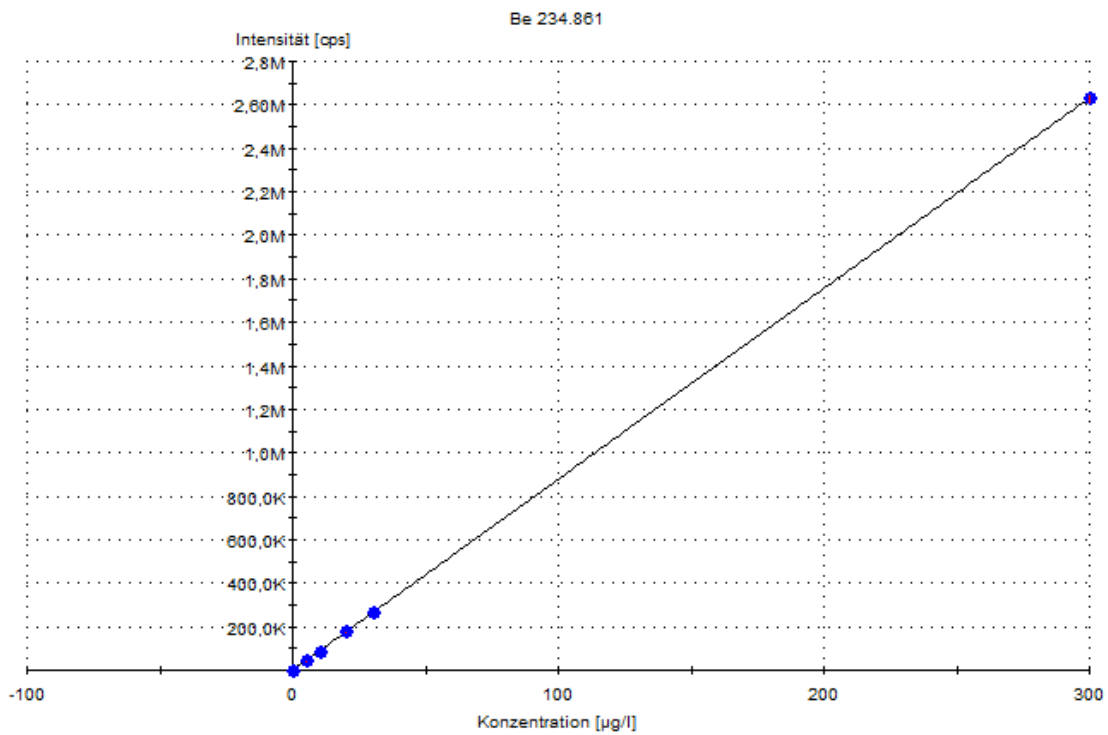


BERYLLIUM / Be

LOD : 0.0319 ppb - 0.25 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

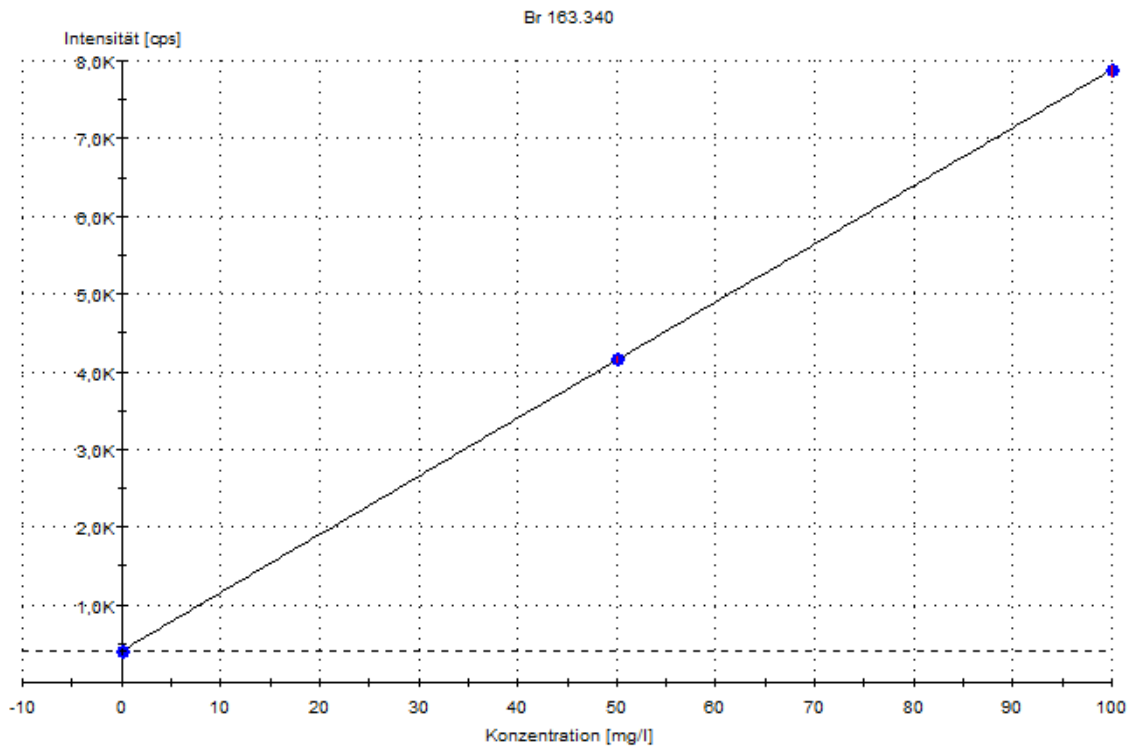


BROMINE / Br

LOD : 0.29 ppm - 0.6 ppb

Calibration MAX : 120 ppm

Correlation coefficient : 0.99999

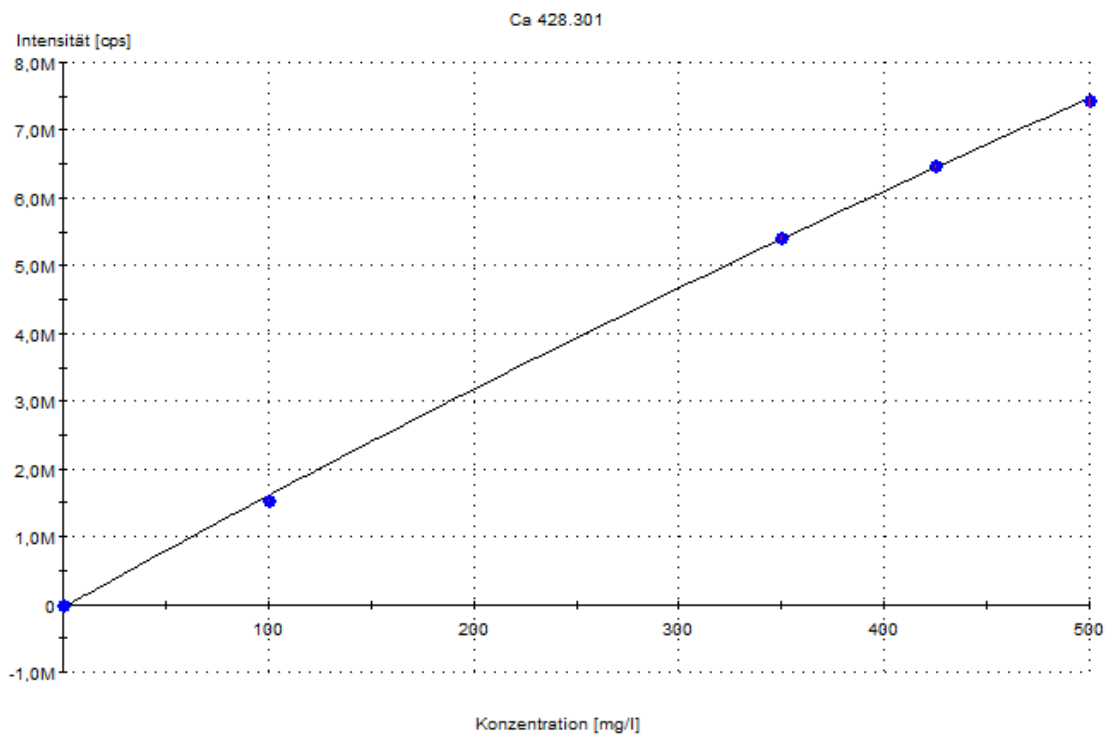


CALCIUM / Ca

LOD : 0.05 ppm - 0.5 ppm

Calibration MAX : 600 ppm

Correlation coefficient : 0.99994

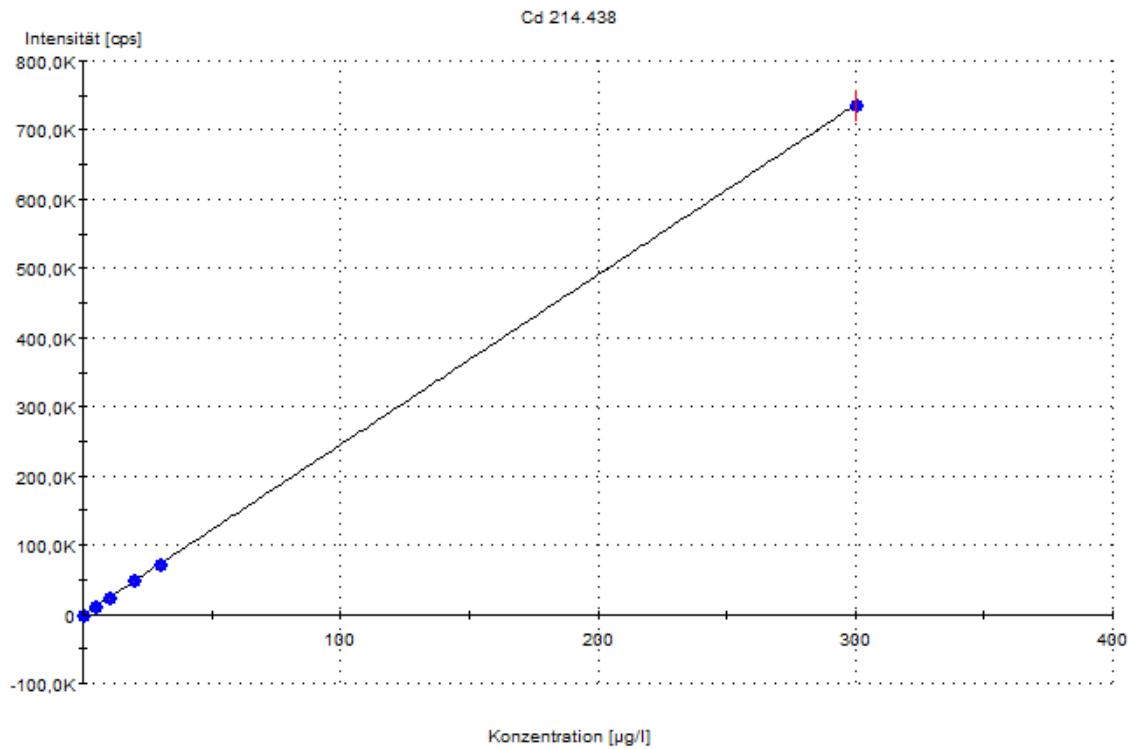


CADMIUM / Cd

LOD : 0.2 ppb - 0.9 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

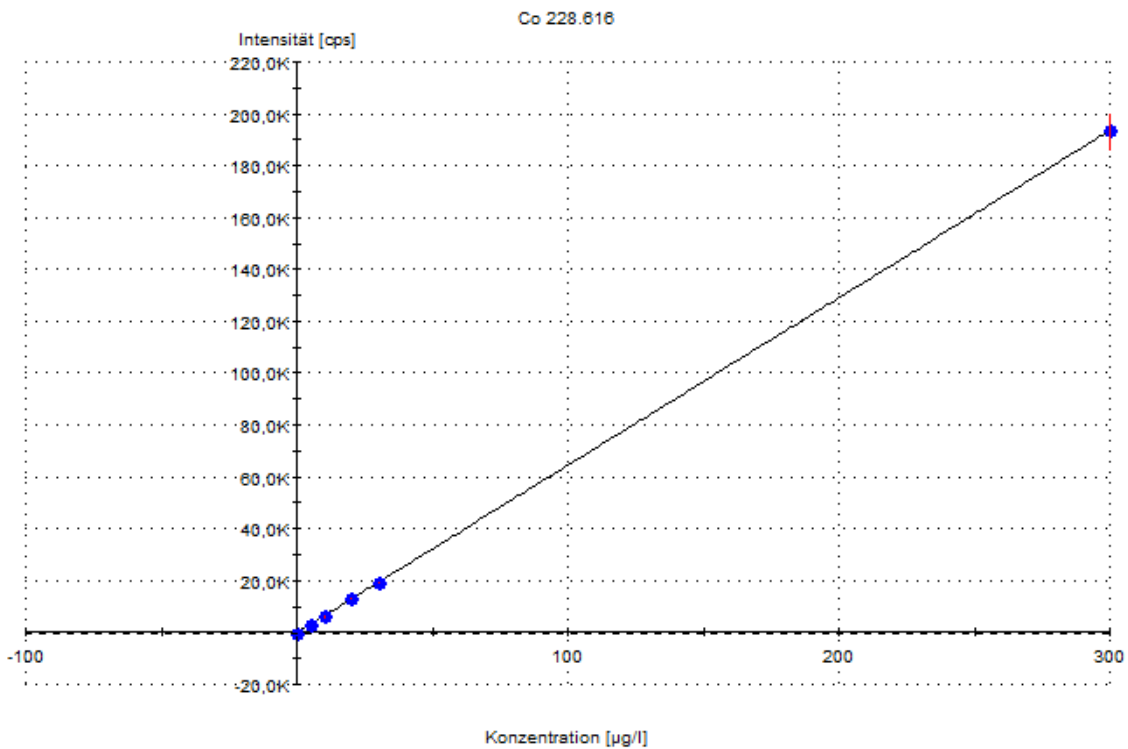


COBALT / Co

LOD : 0.382 ppb - 1.4 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

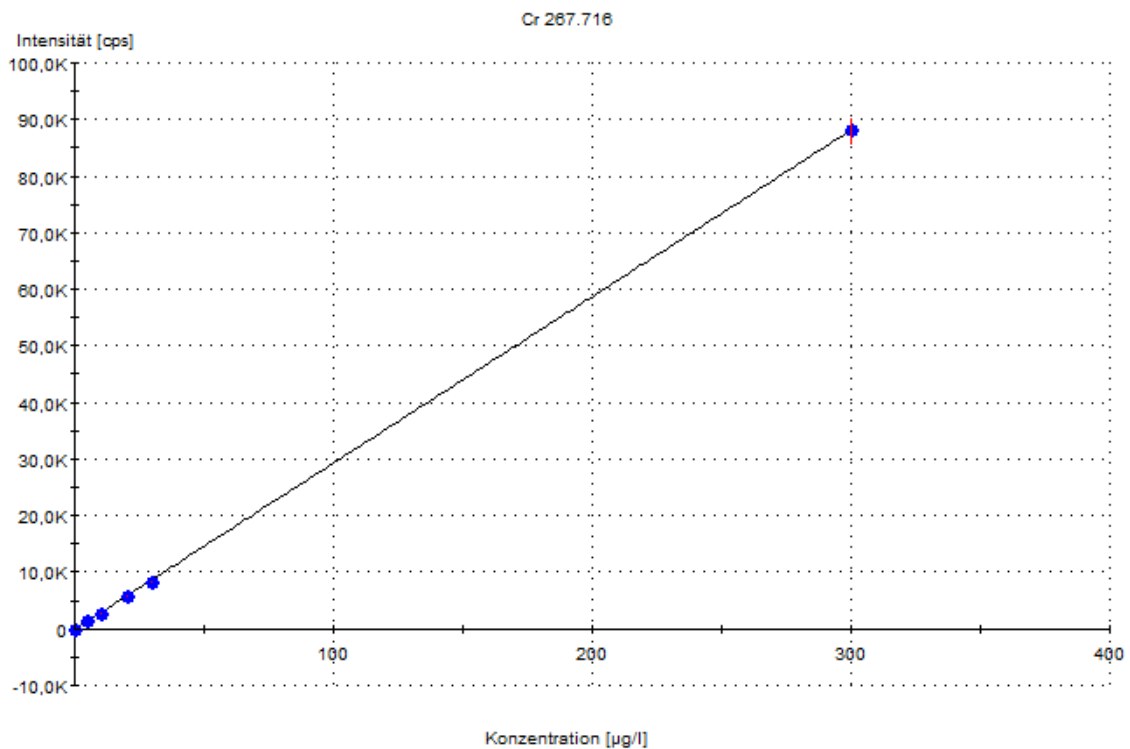


CHROMIUM / Cr

LOD : 0.902 ppb - 1.5 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

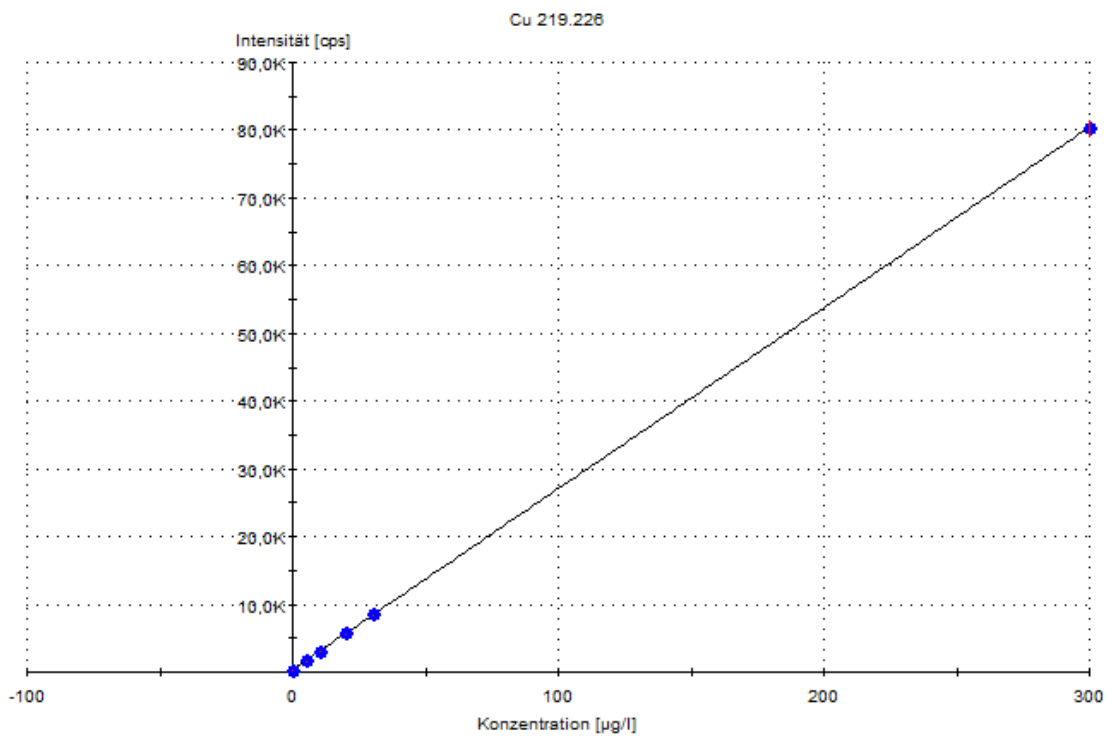


COPPER / Cu

LOD : 1.18 ppb - 3.5 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

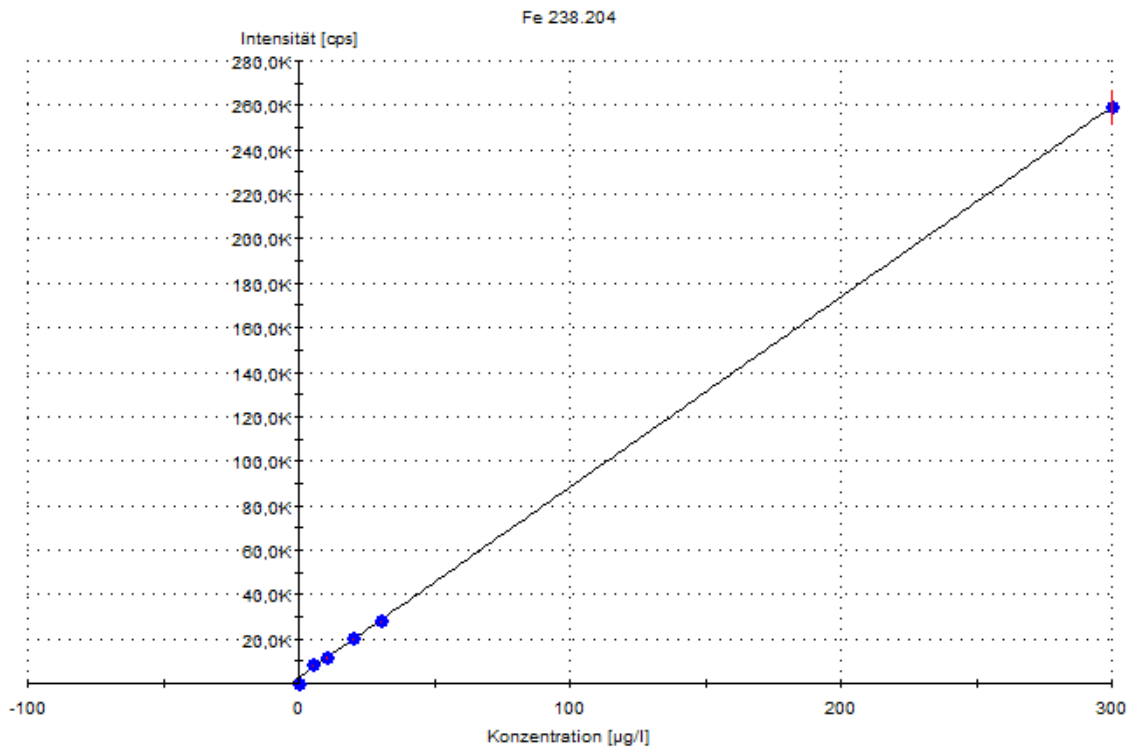


IRON / Fe

LOD : 0.307 ppb - 1.4 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99744 - 0.99992

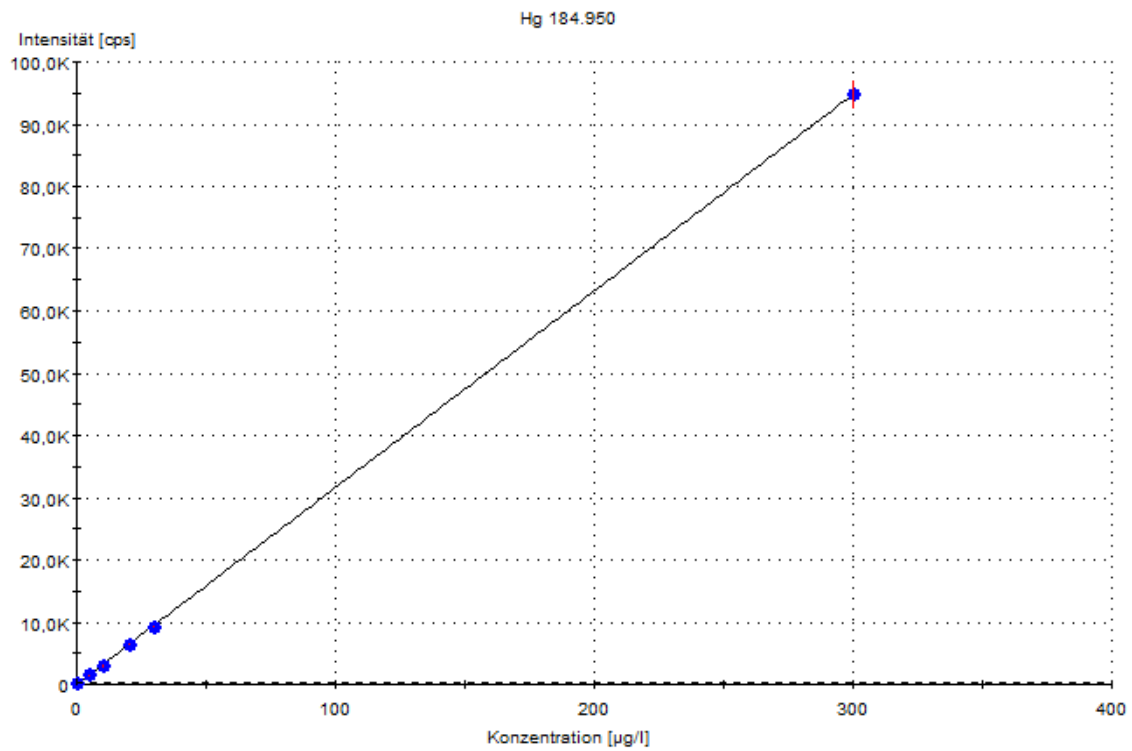


QUICKSILVER / Hg

LOD : 0.7 ppb - 1.3 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999

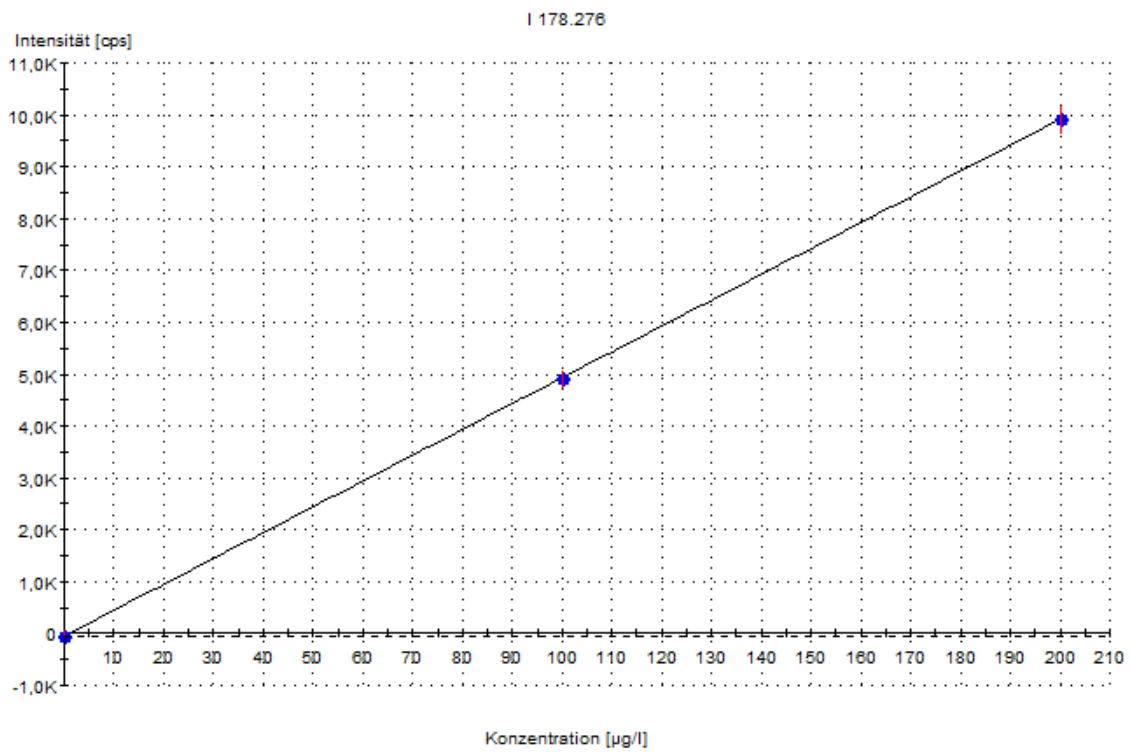


IODINE / I

LOD : 5.54 ppb - 6.83 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99976

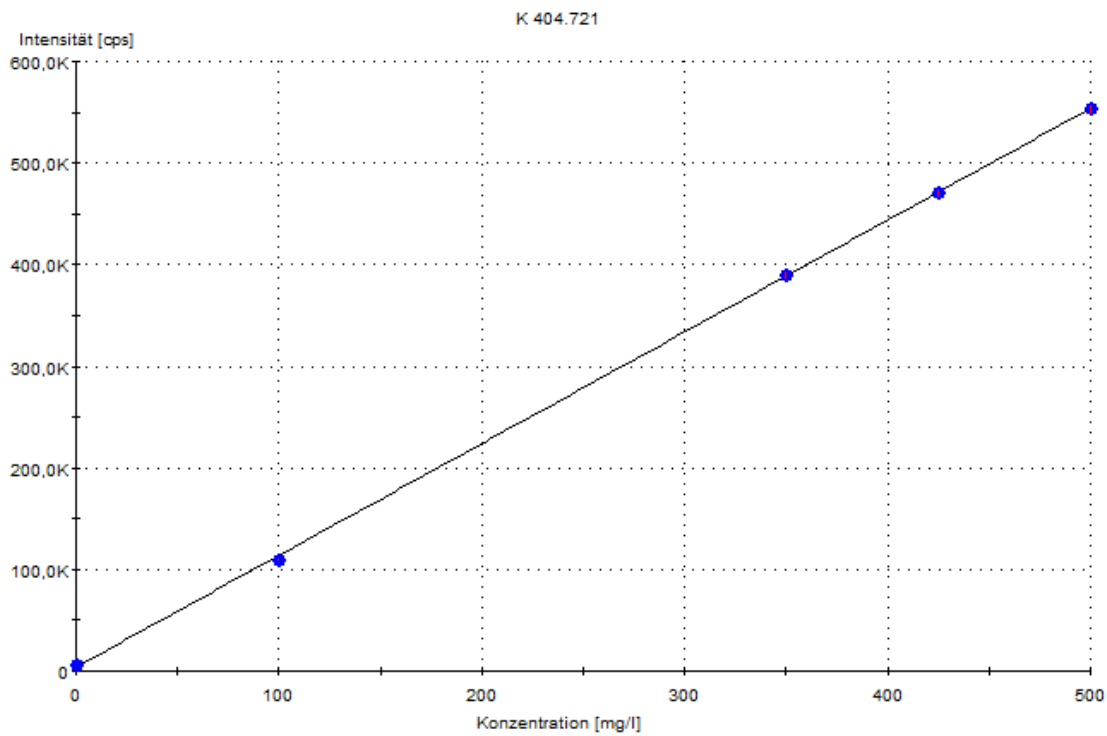


POTASSIUM / K

LOD : 1.83 ppm - 2 ppm

Calibration MAX : 600 ppm

Correlation coefficient : 0.99995

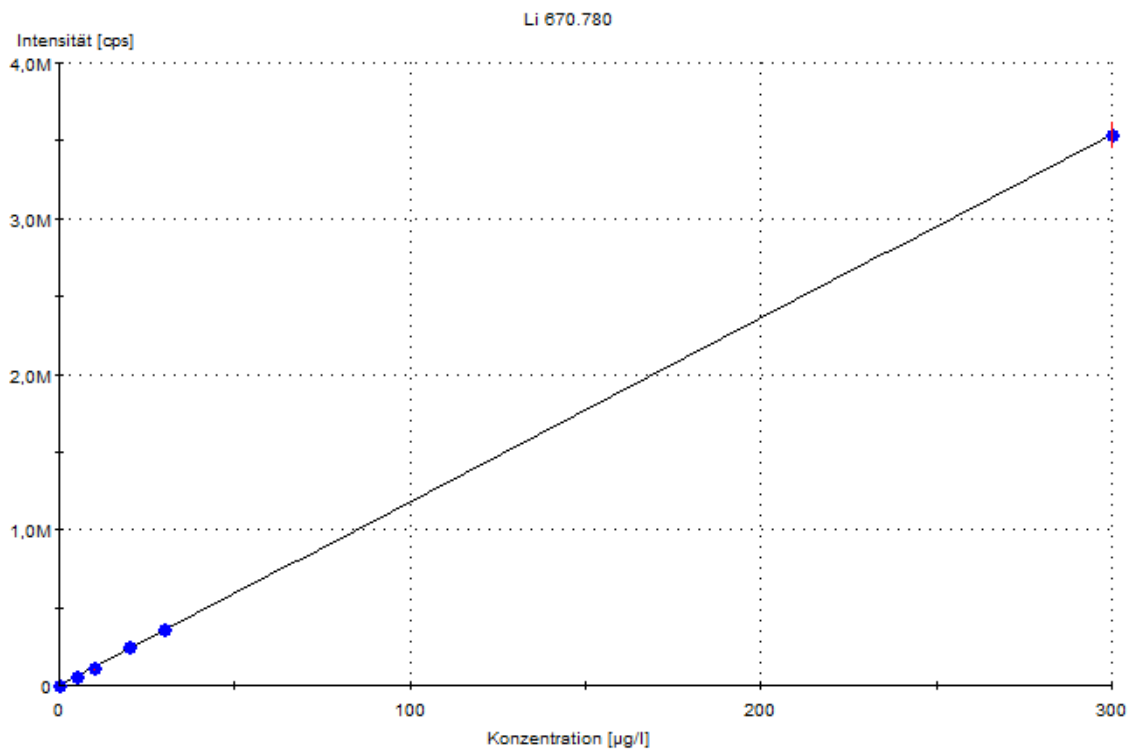


LITHIUM / Li

LOD : 0.039 ppb - 0.7 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

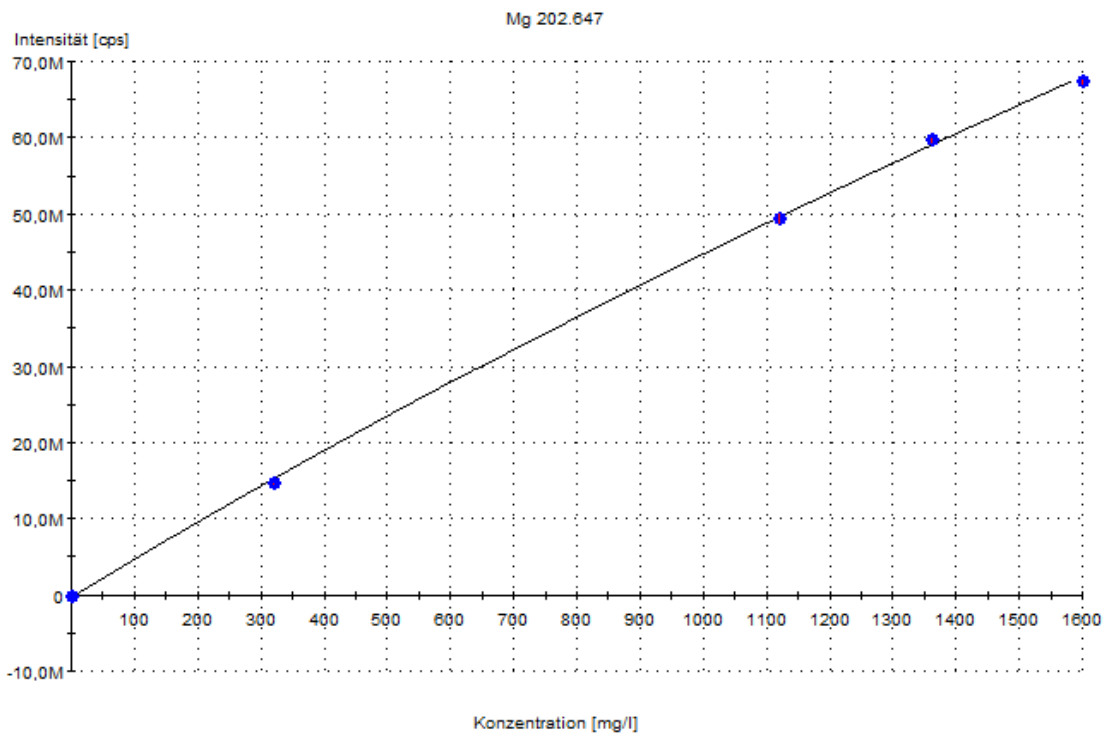


MAGNESIUM / Mg

LOD : 0.0008 ppm - 1ppm

Calibration MAX : 1.920 ppm

Correlation coefficient : 0.99979

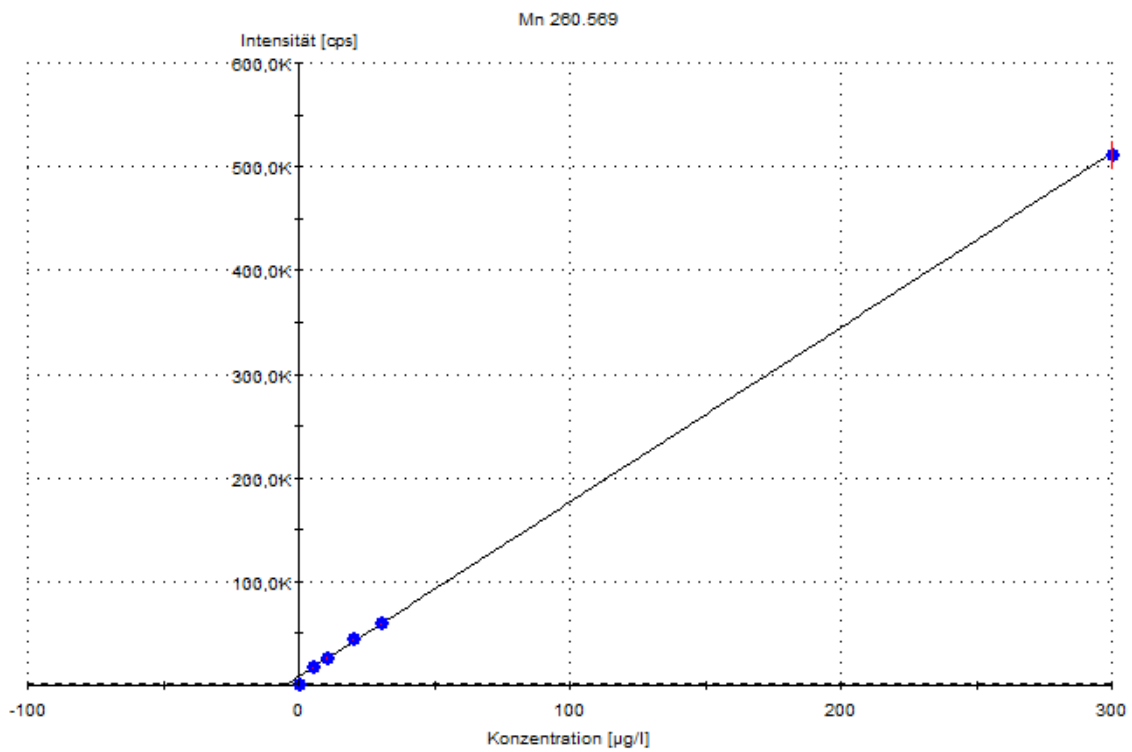


MANGANESE / Mn

LOD : 0.116 ppb - 0.384 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99986

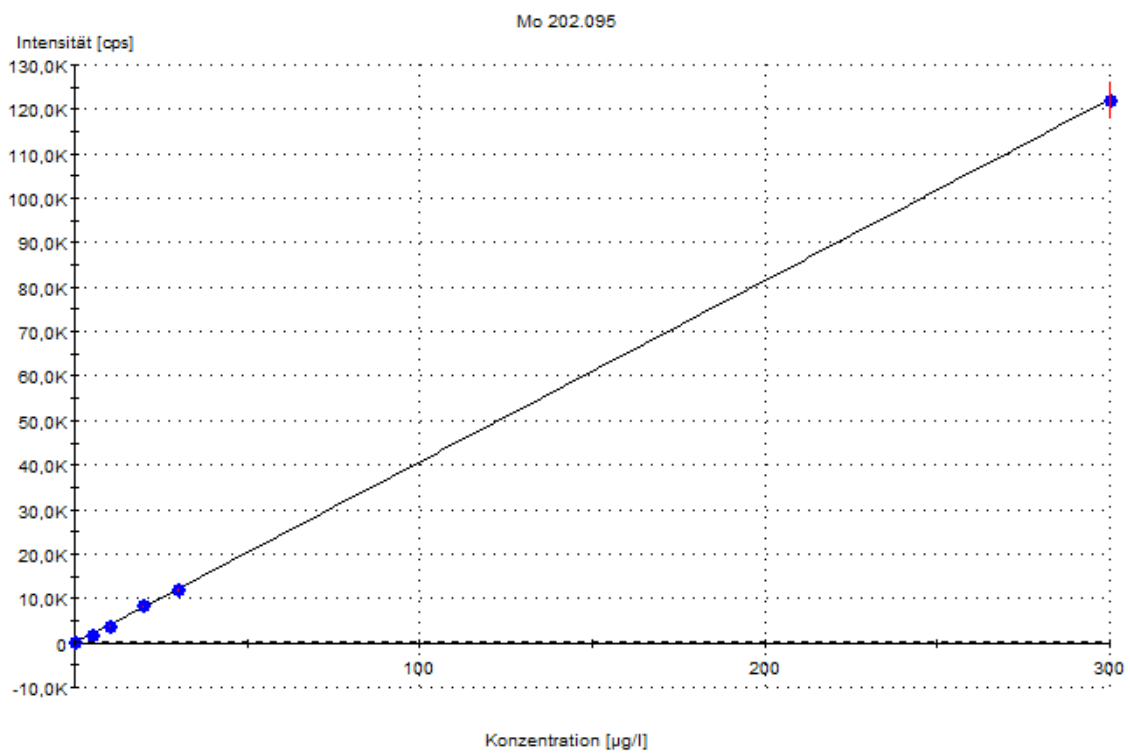


MOLYBDENUM / Mo

LOD : 0.619 - 0.55 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999

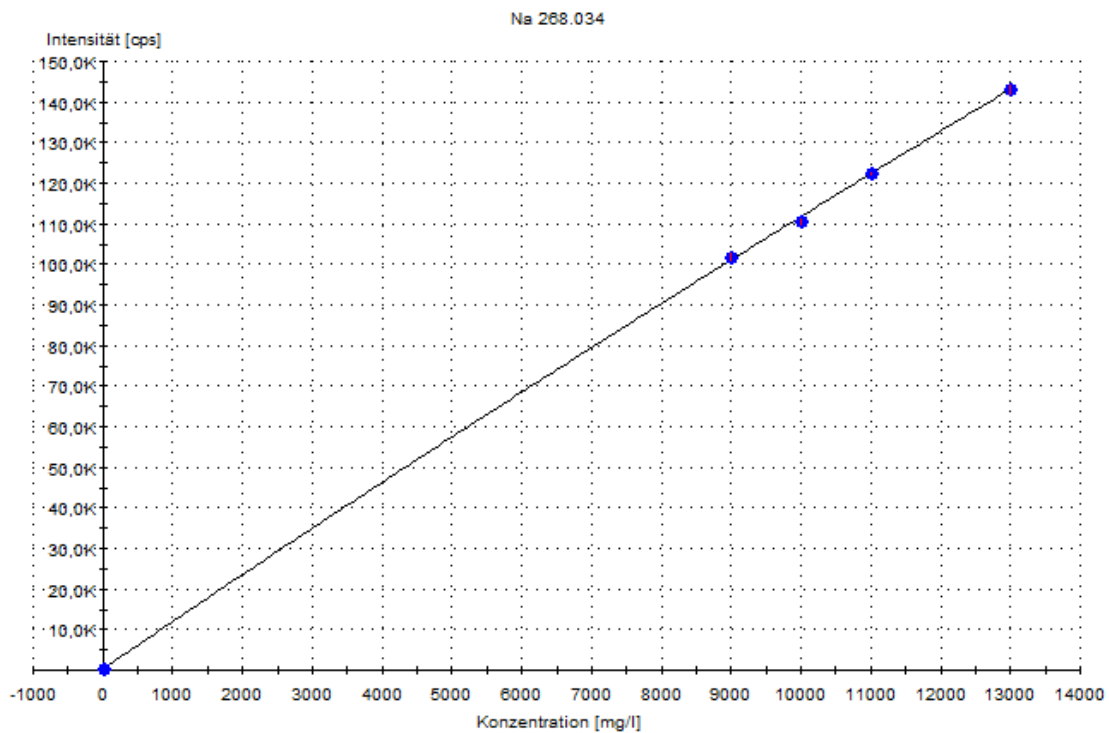


SODIUM / Na

LOD : 11.8 ppm - 70 ppm

Calibration MAX : 15600 ppm

Correlation coefficient : 0.99991

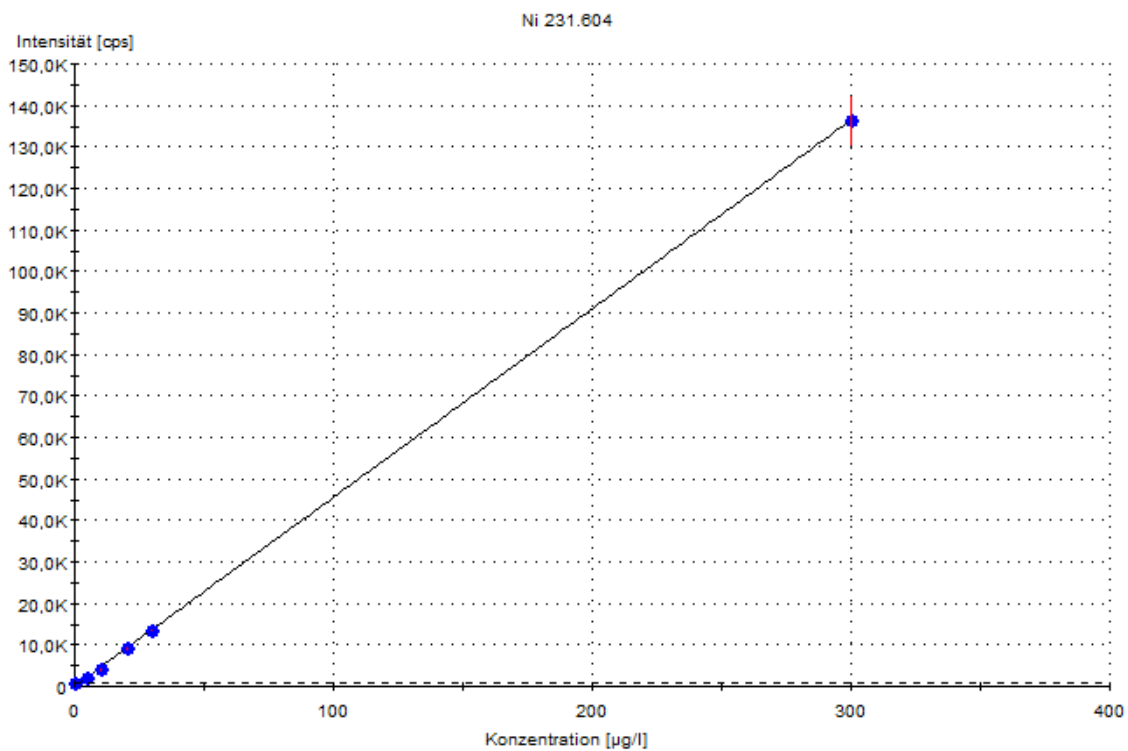


NICKEL / Ni

LOD : 0.502 ppb - 0.87 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

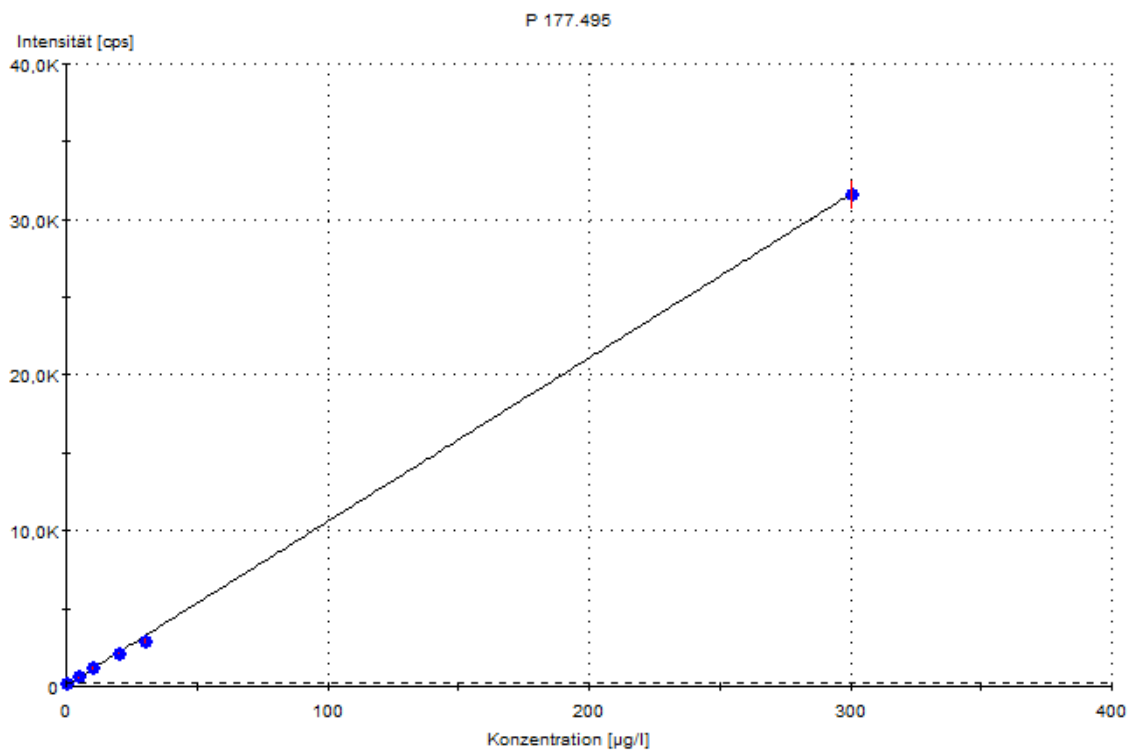


PHOSPHOROUS / P

LOD : 1.42 ppb - 2.32 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99991 - 0.99999

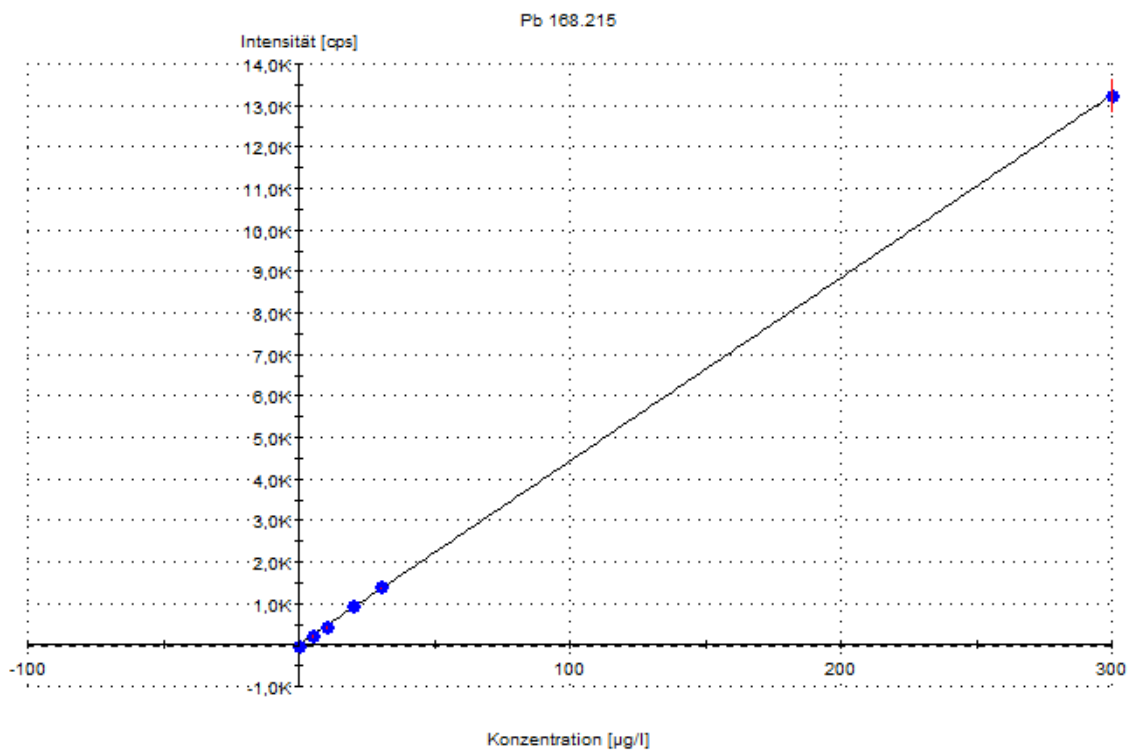


LEAD / Pb

LOD : 1.3 ppb - 2.5 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99995

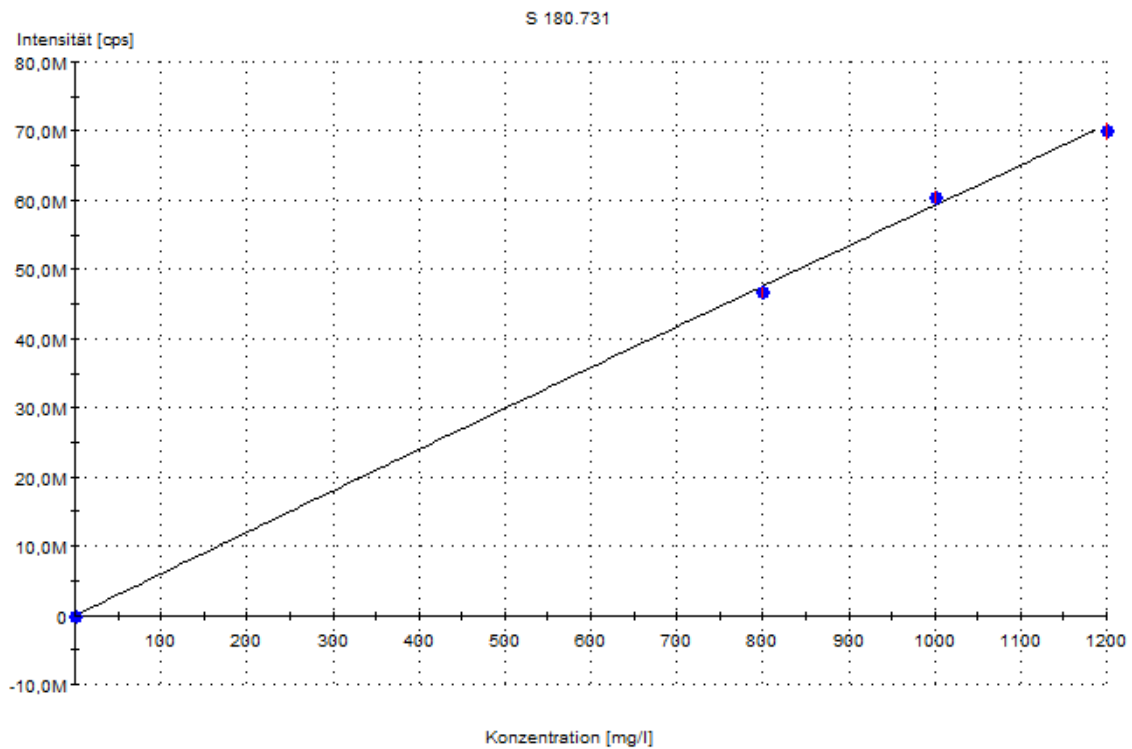


SULPHUR / S

LOD : 0.07 ppm - 1 ppm

Calibration MAX : 1440 ppm

Correlation coefficient : 0.99952

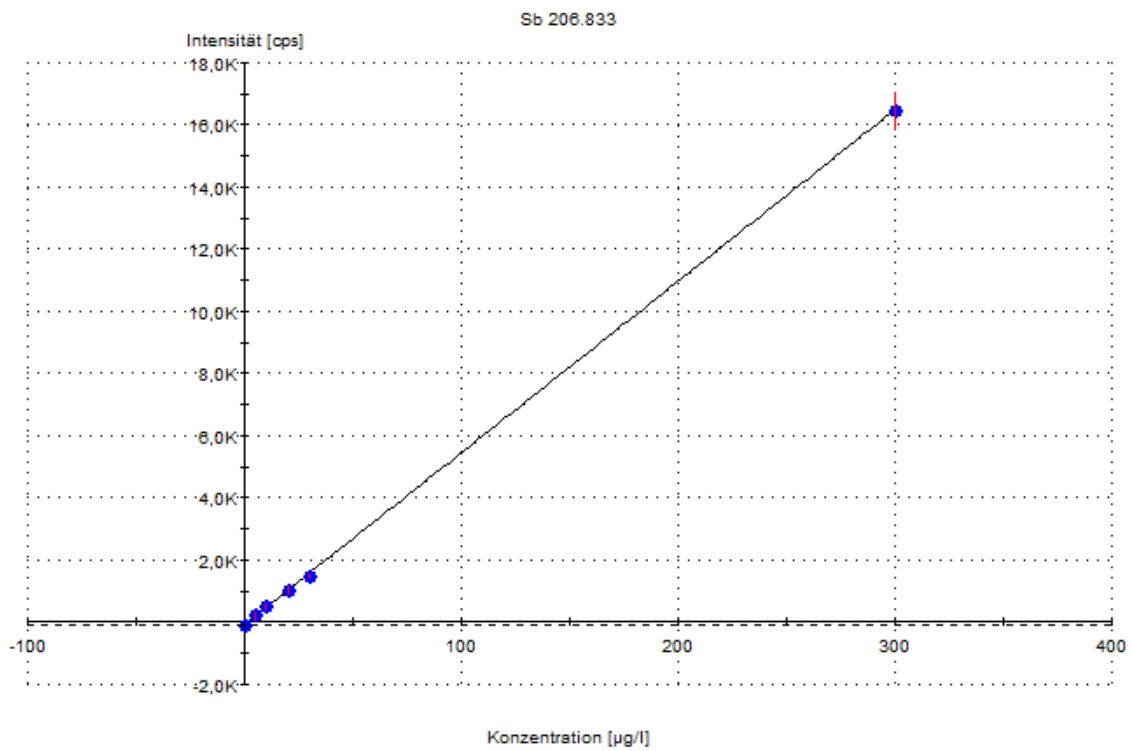


ANTIMONY / Sb

LOD : 5.2 ppb - 12 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999

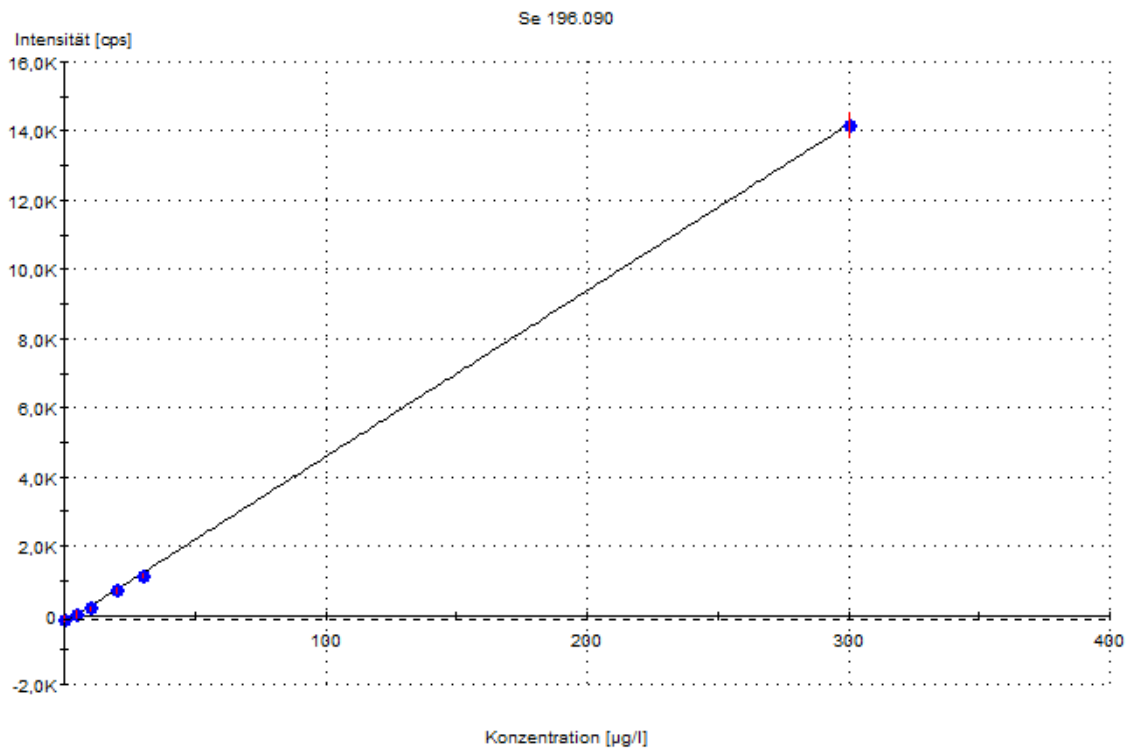


SELENIUM / Se

LOD : 7 ppb - 16 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

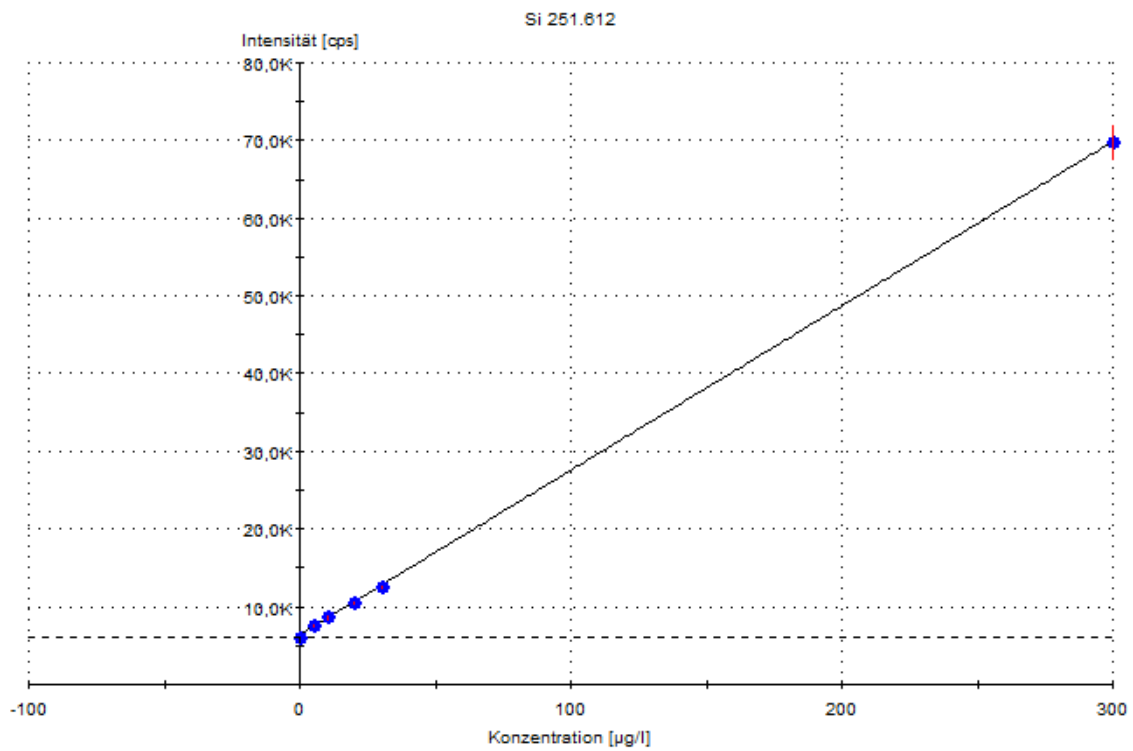


SILICON / Si

LOD : 3.46 ppb - 4.7 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99998

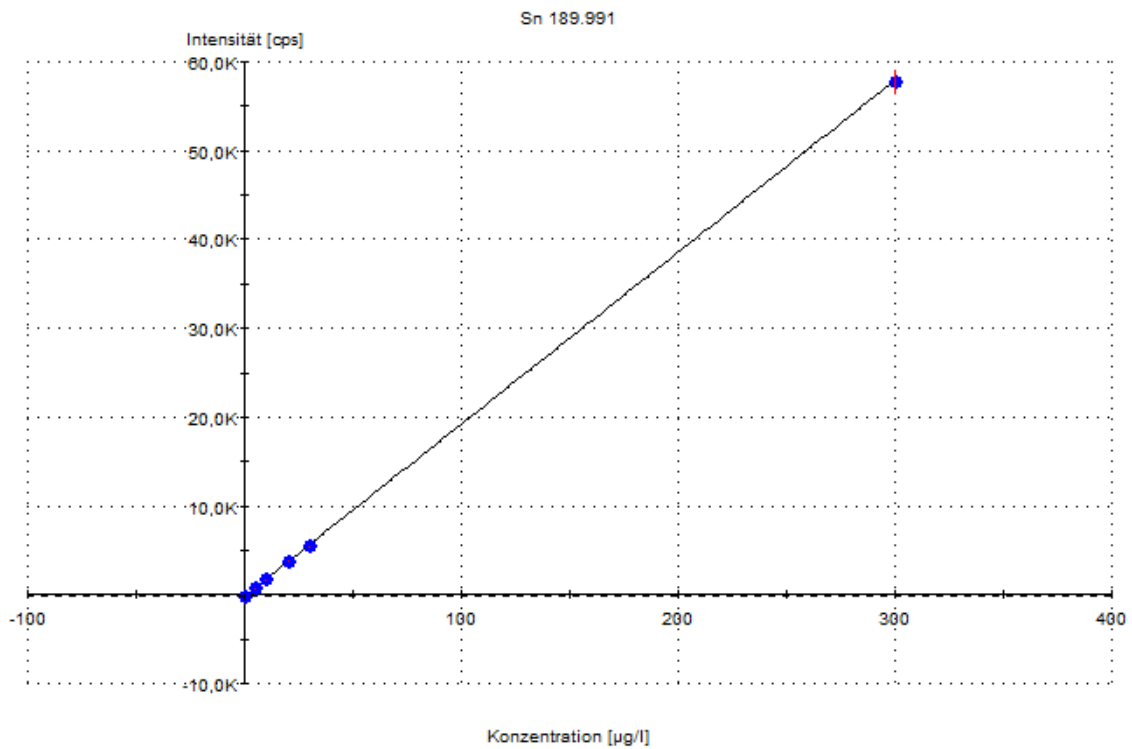


TINN / Sn

LOD : 0.889 ppb - 1.5 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

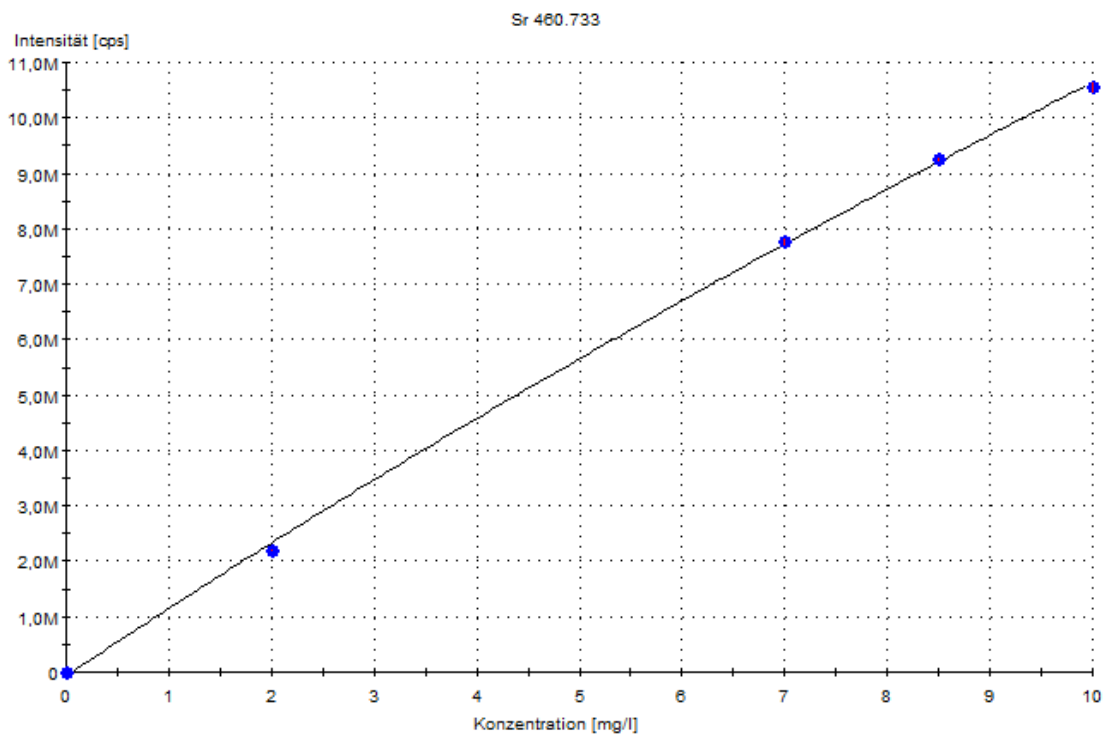


STRONTIUM / Sr

LOD : 0.00167 ppm - 0.002 ppm

Calibration MAX : 12 ppm

Correlation coefficient : 0.99981

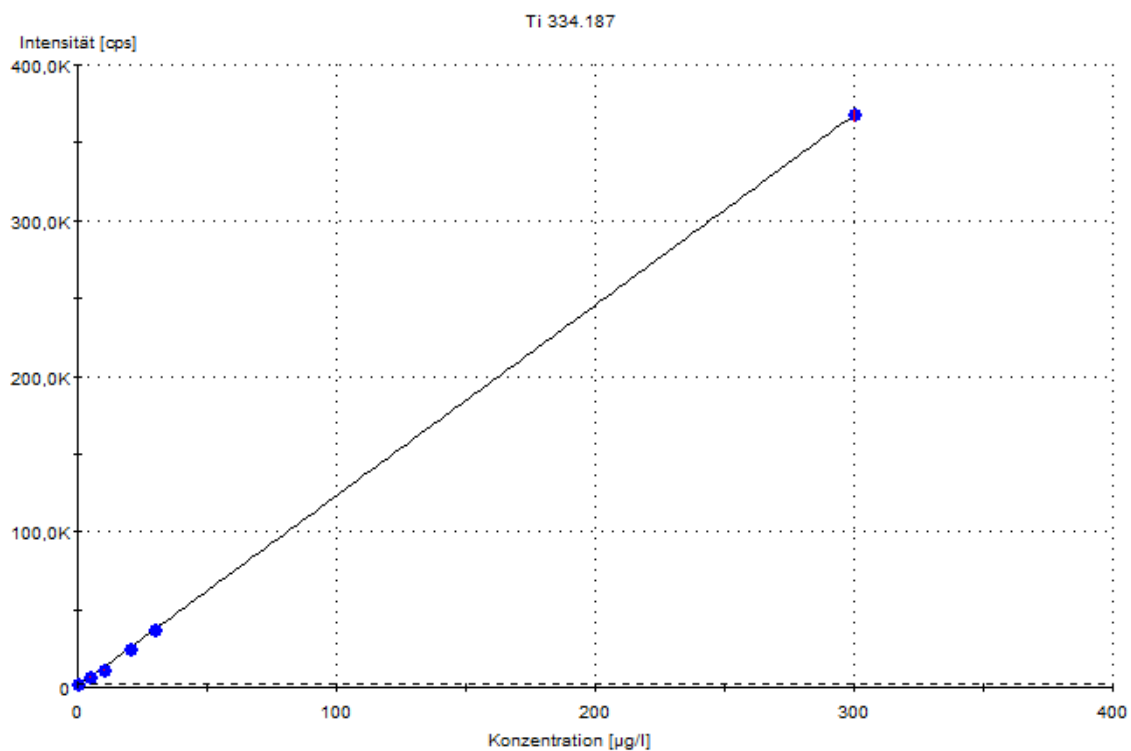


TITANIUM / Ti

LOD : 0.31 ppb - 1.57 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1

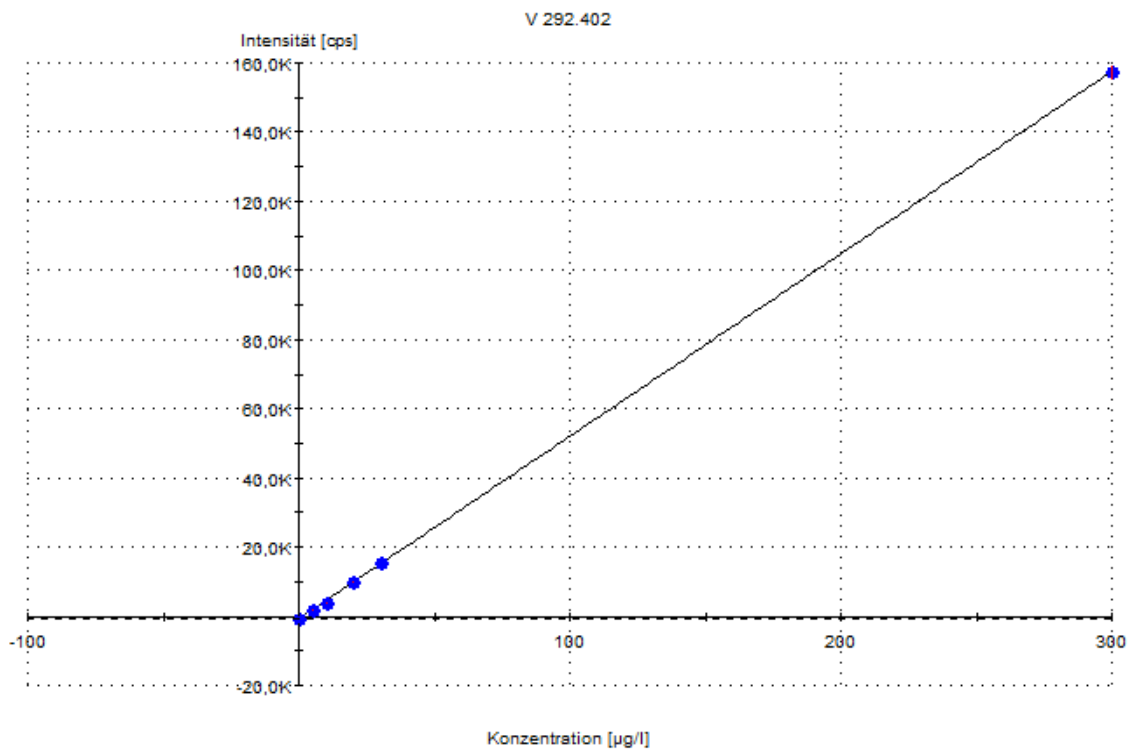


VANADIUM / V

LOD : 0.92 - 1.5 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999 - 1



ZINC / Zn

LOD : 0.149 ppb - 0.7 ppb

Calibration MAX : 360 ppb

Correlation coefficient : 0.99999

