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ABSTRACTS of POSTERS

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**ANALYSIS OF SOIL AND SEWAGE SLUDGE BY ICP-OES AND THE
GERMAN STANDARD DIN 38414 SAMPLE PREPARATION
TECHNIQUE (P 3)**

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The elemental analyses of soil and sewage sludge has developed to become one of the main applications for ICP Optical Emission Spectrometry (ICP-OES) and is described in many official procedures.

These methods include different acid mixtures and digestion techniques. Even though the German standard DIN 38414 Part 7 and the Dutch NEN 6465 do not guarantee complete recoveries for all elements, they are widely accepted in Europe. This paper describes sample preparation, line selection and investigates precision, accuracy and limits of detection.

The SPECTRO CIROSCCD EOP with axial plasma observation and the SPECTRO CIROSCCD SOP with radial observation were compared and evaluated for the analyses of soil and sewage sludge. Accuracy was investigated using the certified reference materials CRM-141 R, CRM-143 R and GSD 11.

Both instruments show excellent performance in terms of speed, precision, accuracy and detection limits for the determination of trace metals in soil and sewage sludge.

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