Excerpt from

Geochemical

ATLAS

Federal Republic of Germany

Distribution of heavy metals in waters and stream sediments

HEINRICH FAUTH, ROLAND HINDEL, ULRICH SIEWERS & JÜRGEN ZINNER

Sampling

Rudolf Wewer, Erich Adick, Klaus Bieramperl, Hubert Böttcher, Wolfgang Bolbecher, Andreas Bruns, Rainer Büsing, Cornelius Carp, Michael Dempewolf, Jörg Detlef Eckhardt, Fred Flohr, Manfred Gläser, Abdul Hanan, Henner Hartmann, Wilfried Kramm, Michael Krieter, Rainer Kretschmann, Jörg Leopold, Wilhelm Nichstädt, Klaus Rust & Horst Wolfrum

Sample preparation

Horst Fechner, Margarete Gryschka, Wolfgang Jürgens, Heidemarie Klesper, Brigitte Meyer & Frank Weinert

Analytics

Hermann Fesser, Ulrich Brinkmann, Joachim Cramm, Wolfgang Glatte, Bodo Harazim, Klaus Last, Bodo Mieke, Jürgen Rausch, Klaus Tacke & Wilhelm Wisch

Hannover 1985 (Digital processing and provision 2022)

FEDERAL INSTITUTE for GEOSCIENCES and NATURAL RESOURCES

In Commission: E. Schweizerbart'sche Verlagsbuchhandlung (Nägele u. Obermiller), Stuttgart

Authors' addresses[1],[2]:

Dr. H. FAUTH, Dr. U. SIEWERS, J. ZINNER,
Bundesanstalt für Geowissenschaften und Rohstoffe,
Stilleweg 2, D-30655 Hannover.

Dr. R. HINDEL,
Niedersächsisches Landesamt für Bodenforschung,
Stilleweg 2, D-30655 Hannover

ISBN 3-980 1097-0-4

Hannover 1985

Editor: Dr. D. Pfeiffer

Publisher address[2]:

Bundesanstalt für Geowissenschaften und Rohstoffe
Stilleweg 2, D-30655 Hannover

Distribution[2]:

E. Schweizerbart'sche Verlagsbuchhandlung
(Nägele u. Obermiller),
Johannesstr. 3A, D-70176 Stuttgart; Tel.: +49 711/351456-0

---

[1] At the time of digital provision, the authors mentioned are no longer active in the BGR for reasons of age. The digital processing was carried out by U. Rauch, Bundesanstalt für Geowissenschaften und Rohstoffe, Dienstbereich Berlin, Wilhelmstraße 25-30, D-13593 Berlin, Email: uwe.rauch@bgr.de, geochemischeatlanten@bgr.de.

[2] The addresses were updated to the status of the year 2022.

2.3.1.6 Nickel in stream waters

The nickel concentrations range from 1 ppb (detection limit) to 900 ppb. The median (50 percentile) is 2 ppb.

The frequency of slightly elevated Co and Ni values in the North German lowlands is probably due to the low pH of surface waters in the peatlands. Metals are considerably more soluble under these conditions.

Elevated nickel values in surface waters are predominantly anthropogenic in origin. Nickel compounds can be released into the environment by industrial processes, particularly smelting, by burning coal and oil, as well as by car exhaust.

Nickel from natural sources enters the groundwater and surface waters in relatively insignificant quantities. lt could not be determined whether the generally elevated Ni values in the areas of silica-poor igneous rocks in the Vogelsberg, Westerwald and Rhön regions were of anthropogenic or natural origin. So far, no criteria that could be used for nickel prospecting have been found.

There are as yet no statutory limits governing the concentration of nickel in drinking water.