# TRACE ELEMENTS IN THE WATERS OF THE DUNE WATER CATCHMENT AREA WITH ARTIFICIAL RECHARGE OF AMSTERDAM.

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SUMMARY

After a brief discussion of the geology, hydrology and pes of ground water exploitation in the dune water tchment area with artificial recharge of Amsterdam the sults of a survey of a number of trace elements in the rious chemical water types are presented:

A comparison of the main water types as based on major element composition with the trace elements shows that the major water types have each distinctly different quantities of trace elements.

Trace elements behave differently when passing through the infiltration and extraction systems. Percentual decreases in trace elements range from 40-100% when infiltration river water is compared with the water at the outlet of the area in the Oranje mixing basin.

3. A reduced zone occurs in the brackish transitional zone between the fresh water and the underlying salt water in the undisturbed situation below the culmination of the fresh water lens. Some trace elements in this zone are strongly enriched, others show a rapid and almost complete selective removal.
4. A proper understanding of the details of the flow patterns in the aquifers is prerequisite for an adequate interpretation of the trace element composition of the waters.

The trace elements were analysed by activation analysis at the Nuclear Reactor Centre, Petten.