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Die meereschemische Forschung im Deutschen Hydrographischen Institut (DHI) in Hamburg
(1945-1990)

The marine chemical research in the German Hydrographic Institute (DHI) Hamburg (1945-1990)

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Zusammenfassung:

In der vorliegenden Arbeit wird die Entwicklung des Fachgebietes „Meereschemie“ im Deutschen Hydrographischen Institut von dessen Gründung 1945 bis zur Umwandlung in das Bundesamt für Seeschifffahrt und Hydrographie 1990 dargestellt. Während dieser Zeit haben die Meereschemiker des DHI wertvolle Erkenntnisse über die natürlichen Bestandteile und die von den Menschen stammenden Verunreinigungen des Meerwassers sowie über die chemischen Prozesse im Meer gewonnen. Außerdem haben sie durch eigene Untersuchungen und durch Mitarbeit in nationalen und internationalen Gremien wesentliche Beiträge zum Schutz der Meeresumwelt geleistet.

Abstract:

The This article begins with a short outline of the history of marine chemistry from the detection of mayor components to the analysis of dissolved gazes and trace substances in sea water (chapter 1).

In chapter 2 the ground-breaking expeditions are mentioned which were carried out by the British RV *Discovery* and the German FS *Meteor* between 1925 and 1927. During both the cruises chemical measurements were an important part of the scientific programmes.

Chapter 3 describes the establishment of marine chemistry departments within oceanographic institutions at the University of Kiel (Dr. H. Wattenberg) and at the Deutsche Seewarte in Hamburg (Dr. K. Kalle). – World War II broke down most of these structures, but already seven months after of the war the German Hydrographic Institute (DHI) was founded, which continued much of the former oceanographic work including marine chemistry (chapter 4).

During the first years after the war the working conditions were very poor. Later, the situation improved, so that K. Kalle could continue his work on marine chemistry. Besides his work in the DHI, Kalle gave lectures at the University of Hamburg where he was appointed Professor.

In October 1962 Dr. Günter Weichart was engaged in the DHI as successor of K. Kalle (chapter 5). During the first months of his work Weichart constructed a new apparatus for the continuous analysis of sea water from a moving ship. In spring 1963 this apparatus was successfully used on board of the FFS *Anton Dohrn* (Fig.1) for recording phosphate concentrations in the surface water of the Irminger Sea East of Greenland (chapter 6).

In the following years the chemistry group (Fig. 5) was built up systematically. This development was favoured by the growing sensitivity for environmental problems, including marine pollution. The working conditions improved when the new well equipped research vessel *Meteor* (Fig. 2) was put into operation (1964) and new chemical laboratories were built in Hamburg.