



Bundesforschungsanstalt für Ernährung und Lebensmittel

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Report of the 304. Cruise of FRV "Walther Herwig III" 19.09. – 2.10.2007

Chief scientist : Dr. Carsten Meyer

Studies on food quality of fishes from the North Sea and substances of content of mussels and crustaceas and collection of reference samples

Summary:

During the 304. cruise of "Walther Herwig III" chemical, sensorical and biochemical investigations were carried out during ice storage experiments with coalfish, haddock, clod and cod, different new physical measuring instruments for the evaluation of freshness were tested also. Furthermore test material and reference material of fish, crustaceans and molluscs as well as nematods and fish spoiling bacteria were collected for later investigations of the substances of content, species identification and epigenetical studies by different working groups of the BfEL (Federal Research Centre for Nutrition and Food , Department of Fish Quality) on shore.

Narrative of cruise

FRV " Walther Herwig III departed Bremerhaven the 19st of September and scientific investigations started next day at 55° 24' N, 005° 14' E.

In the days following, the fishing grounds "Eggersundbanken", "Vestre bank", "Viking bank", "Halibutt bank" were explored. From the 24. in 09, the fishing grounds of the "NE Shettlands Banks", "Unst bank", "Muggle Flugga", Bressay Grounds", into southern direction "40 Miles bank" were examined. On the basis of the weather-situation on 26.09. with protection of the coast in the "Moray Firth" samples were taken. In the remaining days the fishing grounds "Long Forties" "inner Shoal", "Eco Fiske bank", "the Gut", "Doggerbank", "Nordschillgrund", "White bank", NW-lich Helgoland" and "W-lich Sylt" were investigated. The researches were finished on the Monday midday, the FFS Walther Herwig III" started return voyage to Bremerhaven and was aground at the 2.09.07 15:45 at the berth "Fischkai".

Preliminary results

All tasks of the cruise could be fulfilled. A total of 36 hauls were made and samples of various species of fish, other marine species, bacteria and nematods were collected and prepared for later studies and the analysis at land based laboratories of BFEL.

Ice storage experiments with coalfish, haddock, clod and cod
Quality changes during storage were followed by image analysis, three new different physical devices as well as by QIM scheme and sensory assessment.

Scientific crew members

Name	Institution
Dr. Carsten Meyer	BFEL HH, scientist of charge
Dr. Martin Klempt	BFEL HH,
Dr. Reinhard Schubring	BFEL HH,
Dr. Michael Kröger	BFEL HH,
Dr. Sabine Mierke-Klemeyer	BFEL HH,
Susanne Schering	BFEL HH,
Hans-Jürgen Knaack	BFEL HH,
Karin Schiefenhövel	BFEL HH,
Anke Machetzky	BFEL HH,
Monika Normant	Gdynia, Poland
Britta Hemmy	University Bremen

Hamburg 16th October 2007

Chief scientist