SUMMARY

The aim of the study was to estimate some criteria of quality and safety of "meat" of rainbow trout produced by two breeding systems applied in Poland i.e. through flow water system (OOH) and recirculation one (RAS).

The meat tissue of the trout contained on average 3.15±0.75 % of fat, independently on the breeding system. Oleic acid was the dominant fatty acid (from 29.87% to 30.11%), next palmitic one (from 14.79% to 15.88%), linoleic one (C18:2 n-6): 11,42-12,94% and polyunsaturated docosahexaenoic acid (DHA) from n-3 group (from 11.54% to 12.62%). Sum of EPA and DHA acids amounted to 15.41 - 17.16%, proportion of the acids n-3/n-6 was 1.7, UFA/SFA – about 3.5, PUFA/SFA – about 1.6, and PUFA/MUFA – about 0.8. No influence of breeding technology on content of cadmium (average 0.017±0.028 mg/kg), lead (0.052±0.034 mg/kg) and mercury (0.024±0.008 mg/kg) was found. Application of the created for the study purpose author's complex scale of quality and safety assessment of fish raw material did not demonstrate difference between "meat" of fish breed by the two technologies.

Due to the low fat content in the meat tissue rainbow trout should be included, in dependence on catching season, among lean or medium fatty fish. The counted nutritional indexes of fat confirm its high nutritional value. Low amounts of cadmium, lead and mercury manifest low level of environmental contaminants. Fish breeding technology does not influence quality and safety of rainbow trout "meat". Established for the study the complex scale of quality and safety assessment of fish raw material can be a tool to assist management systems of quality and safety of fish "meat" in the aspect of rational determination of its destination.