Based on nucleotide sequences of sex-specific DNA-markers of salmonid fishes the oligonucleotide primers for polymerase chain reaction were selected with purpose on rapid diagnostic of sex in rainbow trout *Onchorhynchus mykiss*, brown trout *Salmo trutta*, huchen *Hucho hucho* and grayling.
**Thymallus thymallus**

The specify of amplification was determined by nucleotide sequence analysis of PCR-products. All amplified fragments were referred to sex-specific locuses of Y chromosomes in males of investigated fish species. The PCR-products were in size of 880, 607, 521 and 558 for rainbow trout, brown trout, grayling and huchen respectively. Thus the sex determination in above mentioned fish species and identification of genotypic males under process of hormonal sex reversion can be provided using conventional PCR. Present method relates to rapid diagnostics because the data analysis and return of results back to fish farm take one single day.

**Key words**: DNA-markers, PCR diagnostics, sex reversion, salmon raising.

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