Practical works

**Modern methods in biotechnology**

Specialty «7M05201 - Environmental Biotechnology», 1 course.

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**Practical class 12.**

*Content for consideration:*

Methods of purification of RNA

What are microarrays,

The techniques is used for studying and quantifying gene expression

The correlation between amount of mRNA produced with the amount of protein eventually synthesized and measuring the amount of a particular mRNA,

**Northern blotting. Western blotting,**

How can amounts of RNA be quantified?

Optimization of concentration of primers for Real time PCR. RT-PCR (Reverse Transcription PCR, Real Time - PCR) ¬ Used to reverse-transcribe and amplify RNA to cDNA. ¬ PCR is preceded by a reaction using reverse transcriptase, an enzyme that converts RNA into cDNA. Quantitative Real-Time PCR (qRT-PCR) •Method use fluorescent dyes, such as Sybr Green, or fluorescence-containing DNA probes, such as TaqMan, to measure the amount of amplified product as the amplification progresses.

How can amounts of RNA be quantified?

Fluorescent in situ hybridization (FISH).