UNIVERSITÀ DEGLI STUDI
DELL'INSUBRIA

# "Droplet digital PCR"

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## Purpose

Based on the principle of sample partitioning and the application of Poisson statistics, digital PCR enables accurate and absolute quantification of molecules of interest in biological samples.

Using different types of samples, such as cells, tissues, and biological fluids, it is possible to quantify the copy number of transcripts, including microRNAs, analyze copy number variations (CNVs) and gene amplifications, and detect as well as quantify single nucleotide variants (SNVs).

It can also be employed for the identification and quantification of pathogens.

Thanks to its high sensitivity (approximately 0.01%), digital PCR is particularly useful in the evaluation of minimal residual disease in oncology.

**Location**: Department of Biotechnology and Life Sciences (DBSV), Via Dunant 3, Varese, Italy

**Organization**: Instrument available within the Molecular Genetics laboratory.

## Brief Description

**Available equipment**: Bio-Rad QX200 Droplet Reader and Droplet Generator, Plate Sealer; T100 Thermal Cycler (https://www.bio-rad.com/it-it/life-science/digital-pcr/qx200-droplet-digital-pcr-system)

The system can detect targets using both EvaGreen (double-strand binding dye) and hydrolysis probes.

Several collaborations are currently ongoing for the quantification of rare variants, CNVs, and microRNAs.

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