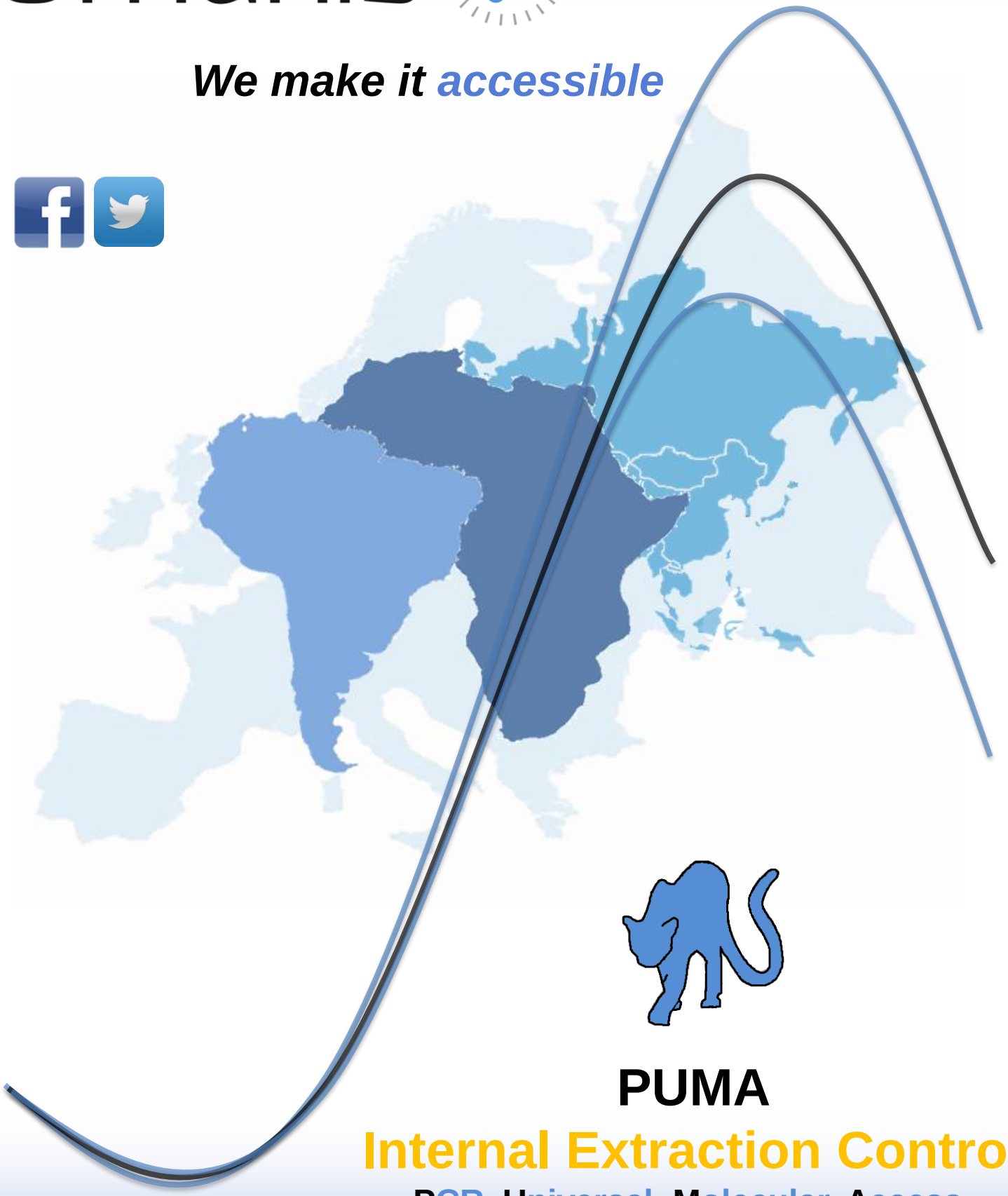
2016

Omunis

We make it accessible



PUMA

Internal Extraction Control

PCR. Universal. Molecular. Access.

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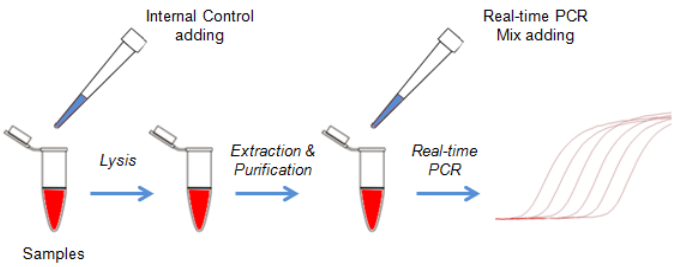
Omunis

PUMA
Extraction Internal Control *(DNA)*

Importance of extraction internal control
Usefulness and extraction protocol

The internal control allows to **validate the extraction step**. It contains a known concentration of cells which contain the control DNA sequence, and which will be simultaneously extracted with the sample.

Extraction protocol



Tested to be used on silica-membrane and on ABI-7500 and LightCycler 480.

The DNA Internal Control (IC) is directly added to the sample.
Following the extraction, the amplification mix is added to the extracted DNAs (Target + IC).

Easy
The addition of the IC directly in the sample allow its use on most automated extractors and thermocyclers.

Specific
No interference with the target sample detection.

Optimized
Ideal for samples of blood and urine.

To ensure the quality of results

The presence of an internal control confirms the success of the extraction step, and limits risks of obtaining false negative (*results considered negative, which do not correspond to the absence of the target in the sample*).
It thus avoids the lack of patients therapeutic management, the disease spreading, and the questioning of health facilities which performed the diagnosis.

To standardized the results

The addition of an IC significantly reduces variations in results following the real-time PCR analysis. It promotes reproducible results and enables laboratories to get closer to international standards.

This internal control can be used with extraction kits with manual or automated extraction (*since the IC is directly added to the sample*).
It will be useful for commercial kits, but also for “in house” techniques developed in laboratories within research teams.

To make an universal internal control accessible

In order to ensure reliable results in all laboratories in the world, Omunis developed his IC with the most cost-effective ratio, and with the aim to make it accessible to the wider range of population.

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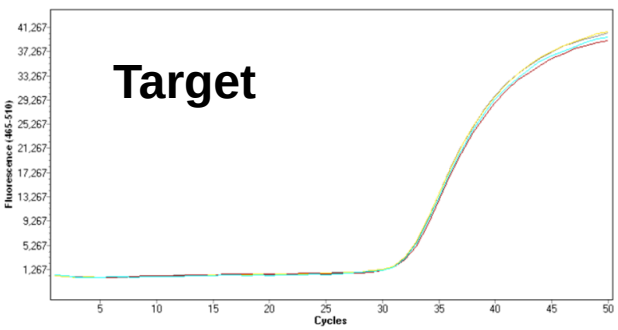
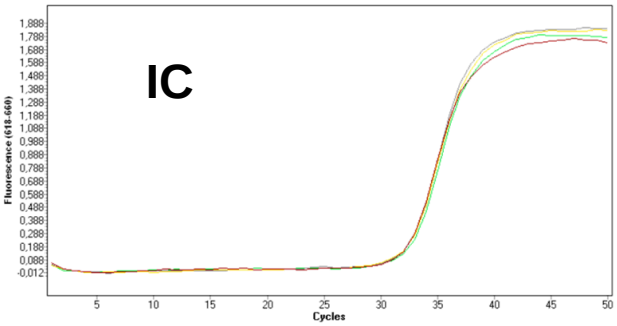
Technical comparison

Samples and Internal Control of extraction (CI)

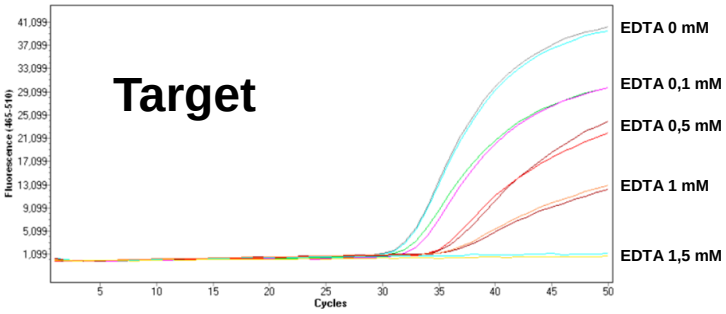
Comparison of sample and IC amplification

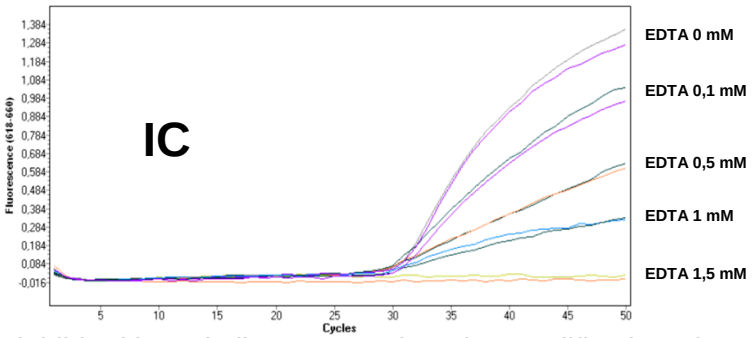




Inhibition of the extraction step

Adding of a PCR inhibitor (*EDTA*) at different concentrations.

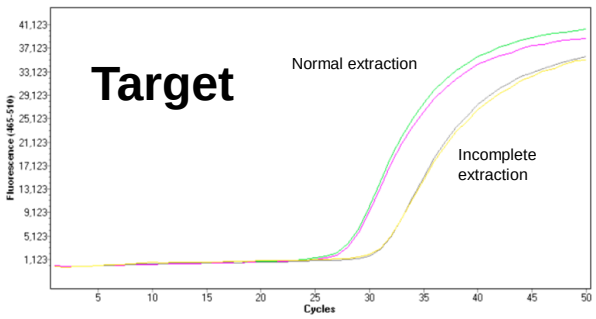


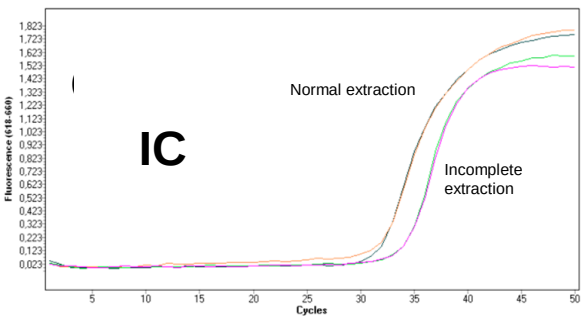


The amplification of the internal control of extraction is inhibited in a similar manner than the amplification of the target.

Simulation of a defective extraction

The lack of extraction has been simulated by replacing one of the extraction component by PBS.

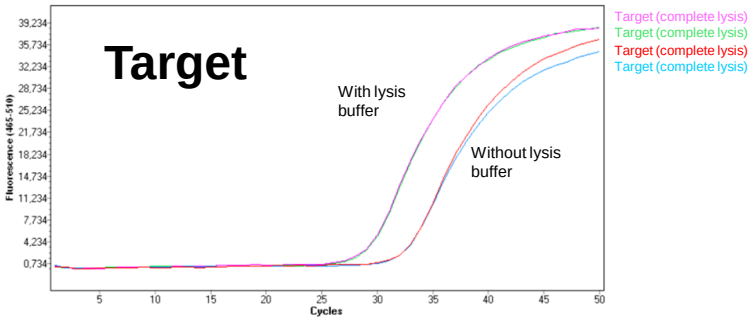


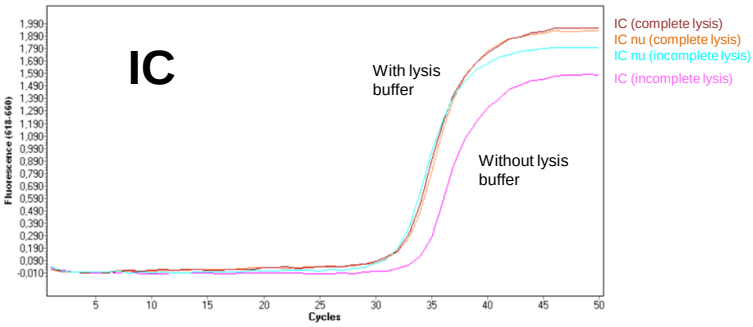


A similar impact on the internal control and target amplification was observed when the extraction is not complete.

Naked DNA extract vs internal control

The internal control and a similar quantity of DNA control were added in the sample. The extraction has been made with or without lysis buffer.





The naked DNA internal control does not allow to detect an extraction issue, unlike the internal control. It has been demonstrated that the internal control is an indicator of extraction efficiency and also that it allows to monitor the inhibitor purification in a sample.