

# SwiftX™ Swabs

## Technical sheet

### ► The SwiftX™ technology:

SwiftX Swabs (50) / SwiftX Swabs (200) contain:

- SwiftX **Component E** (25mL / 100mL): a multifunctional buffer that redisperses viruses and stabilizes RNA
- SwiftX **Component C** and SwiftX **Component P** (each 27mg / 108mg): powerful cocktails of enzymes lysing viruses & cells and neutralizing inhibitors

### ► CE-IVD certified for SARS-CoV-2 RNA purification

- Applicable to a wide range of sample types: polyester swabs, cotton swabs, guanidine-free transport media (VTM, UTM, saline solution, etc.) and saliva
- Compatible with all RT-qPCR kits and protocols

### ► Validated by independent laboratories

- Performance equivalent to QIAGEN or other «classic extraction kits» including detection of weak positive samples (Ct >30)
- Robust to inhibition due to proprietary enzyme cocktail

**Study (Italy):** 36 VTM from selected COVID patients were stored for a few days and tested in the same run with SwiftX Swabs and Genolution automatic extraction. During storage, RNA degrades. Thus, many of the 36 samples are expected to be weak or even “undetectable” samples.

**Table 1a.** Number of samples tested weak and strong positive or not detected.

Results show that SwiftX Swabs detected all samples positive except 1, while Genolution missed 3 samples.

**Table 1b.** Average Ct values on strong and weak sample sets

**Conclusion:** Diagnostic sensitivity of SwiftX Swabs is higher than Genolution extraction.

Genolution extraction concentrates the sample 2-fold, while SwiftX dilutes the sample 1:5. Thus, the expected Ct difference between both methods is 3 cycles. Validation data, however, show a difference of 1-2 cycles only.

This reaffirms the highly efficient inhibitor removal and RNA protection capabilities of SwiftX Swabs, which ultimately lead to better PCR amplification results.

		Genolution			
		Ct < 30	Ct >30	No Ct	TOTAL
SwiftX Swabs	Ct < 30	18	1	1	20
	Ct >30	2	11	2	15
	No Ct	-	1	-	1
	TOTAL	20	13	3	36

		Average Ct values	
		Strong	Weak
SwiftX Swabs		25.1	35.0
Genolution		24.0	33.0

### ► Dry swabs versus VTM: what is the better sample material?

Both can be tested with SwiftX™ Swabs, but usually the protocols with dry swabs give stronger positive results (lower Ct values) as the viral load in the dry swab protocol is higher than when using VTM or other transport media.

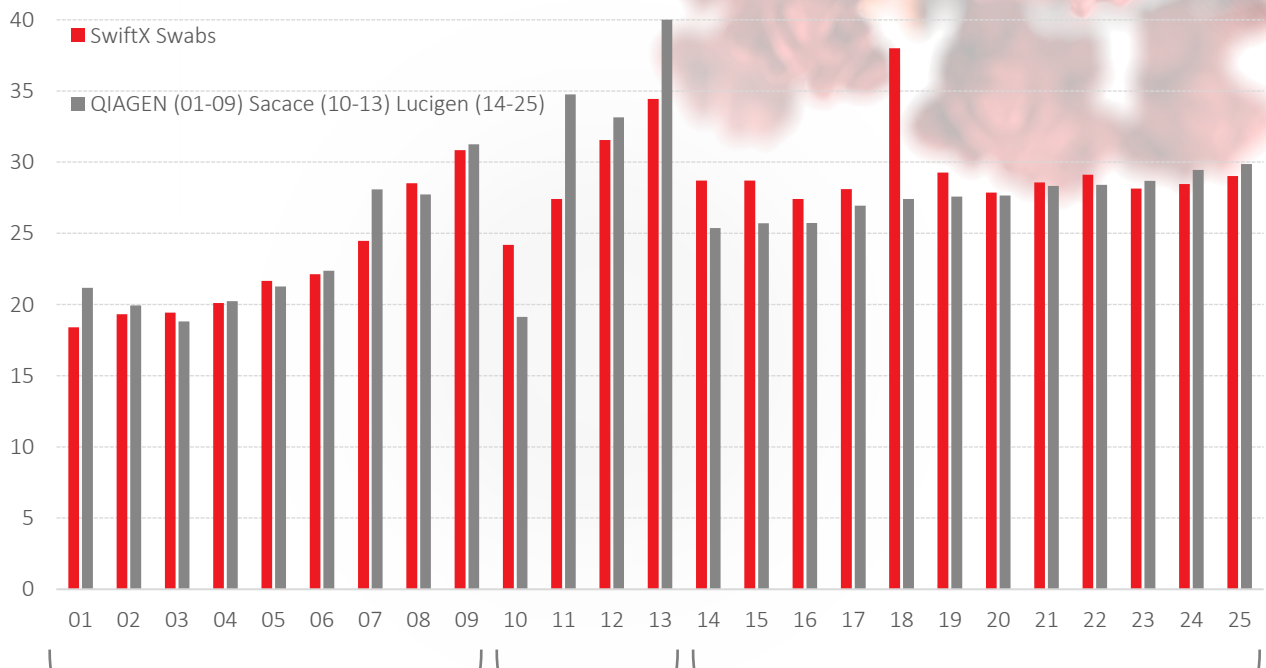


Fig. 1 Side-by-side study of SwiftX Swabs with “classical” extraction kits (QIAGEN and Sacace) and “fast lysis” (Lucigen)

Samples 1-9: SwiftX Swabs shows equivalent Ct values as QIAGEN extraction kit on 9 **dry swab** samples from COVID patients (data Hungary, Genefirst COVID PCR)

Samples 10-13: SwiftX Swabs shows overall better Ct values as SACACE extraction kit on 4 **dry swab** samples from COVID patients (data Hungary, Genefirst COVID PCR)

Samples 14-25: SwiftX Swabs shows overall better Ct values as LUCIGEN extraction kit on 12 **VTM samples** from COVID patients (data UAE, Phoenix Dx COVID PCR)