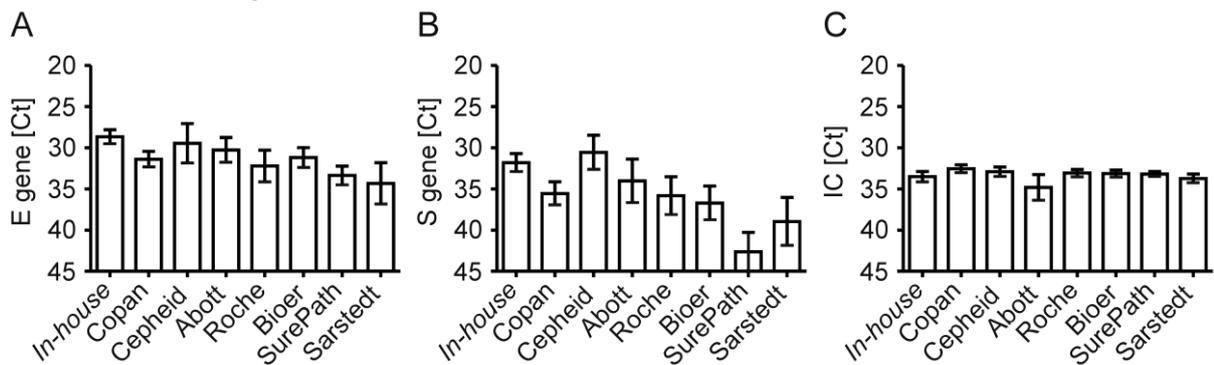


Overcoming Limitations in the Availability of Swabs Systems Used for SARS-CoV-2 Laboratory Diagnostics

Manfred Nairz^{1,*}, Rosa Bellmann-Weiler^{1,#}, Miriam Ladstätter^{2,*#}, Falko Schüllner^{2,#},
Martina Zimmermann¹, Anna-Maria Koller¹, Silvia Blunder¹, Helene Naschberger¹, Werner
Klotz¹, Manfred Herold¹, Sylvia Kerndler², Martina Jeske², David Haschka¹, Verena Petzer³,
Andrea Schroll¹, Thomas Sonnweber¹, Ivan Tancevski¹, Gernot Fritsche¹, Mariana E. G. de
Araujo⁴, Taras Stasyk⁴, Lukas A. Huber⁴, Andrea Griesmacher⁵, Igor Theurl¹, Günter Weiss¹

Supplemental Figures and Supplemental Figure Legends.

Supplemental figure 1

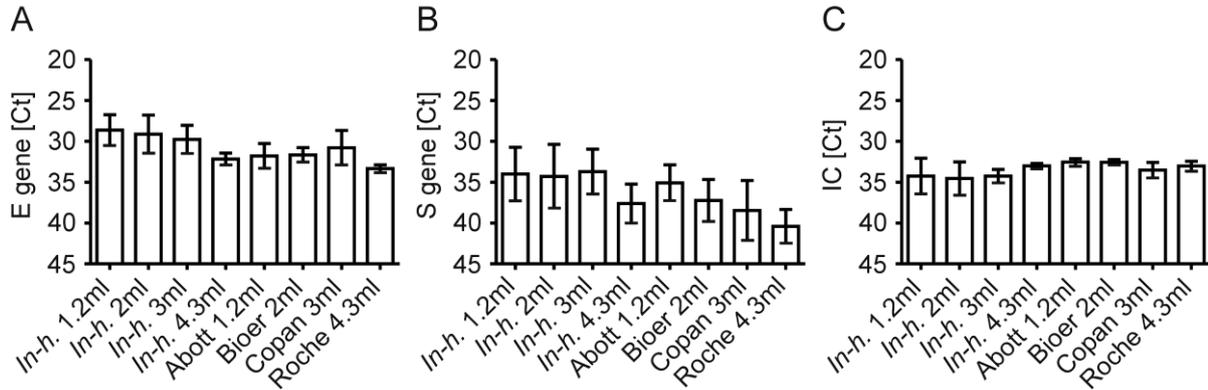


Supplemental Figure 1.

Ct values of all positive RT-PCR results taken with either of eight swabs variants are depicted as mean \pm SEM separately for the viral E gene (A), the viral S gene (B) and the internal control (C). n=26 for the *in-house* system, n=14 for the Copan® system, n=10 for the Cepheid® system, n=8 for the Abbott® system, n=11 for the Roche® system, n=11 for the

Bioer® system, n=6 for the BD SurePath® system n=10 for the Sarstedt® swab. No significant difference due to the used swab type was found.

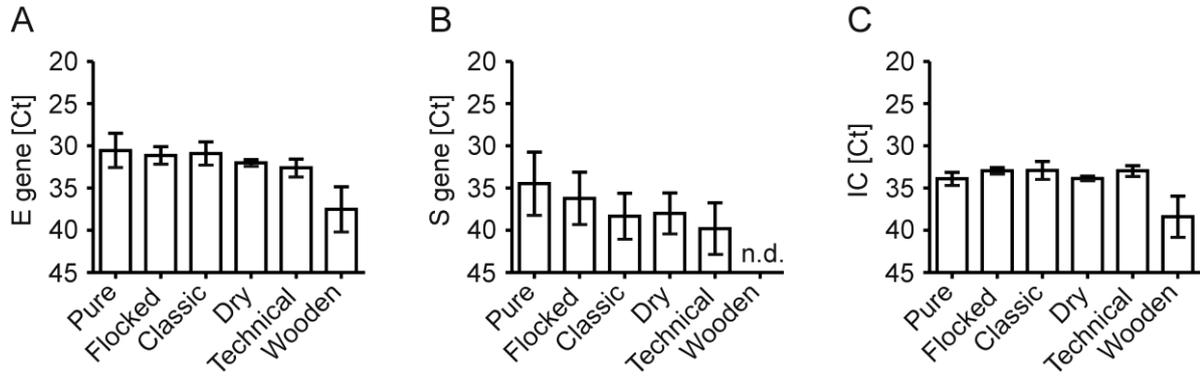
Supplemental figure 2



Supplemental Figure 2.

To look into the effects that the volume of transport medium or preservation fluid as provided by the manufacturer may have on the RT-PCR result, we sampled in 1.2ml, 2ml, 3ml or 4.3ml of *in-house* (*In-h.*) VTM. For comparison, we chose the Abott® system with 1.2ml, the Bioer® system with 2ml, the Copan® system with 3ml and the Roche® system with 4.3ml of liquid. Ct values for the viral E gene (A), the viral S gene (B) and the internal control (IC) are depicted. n=6 independent samples. No statistically significant differences were found.

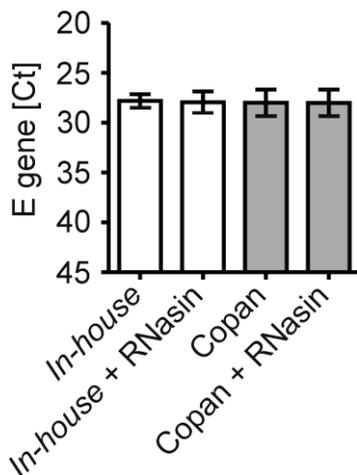
Supplemental figure 3



Supplemental Figure 3.

To assess whether the use of different swabs in combination with the *in-house* VTM tube may affect the RT-PCR result, we sampled with either of six different swabs. Ct values for the viral E gene (A), the viral S gene (B) and the internal control (IC) are depicted. n=4 independent samples. No statistically significant differences were found. n.d. for not detected.

Supplemental figure 4



Supplemental Figure 4.

To see whether an RNase inhibitor may affect the results of RT-PCR, four samples collected with either the *in-house* VTM (white bars) or the Copan UTM (grey bars) were incubated

with or without 4,000 U/ml of RNasin in the refrigerator at 2-8°C for 72 hours. No statistically significant differences in the Ct values of the viral E gene were found.