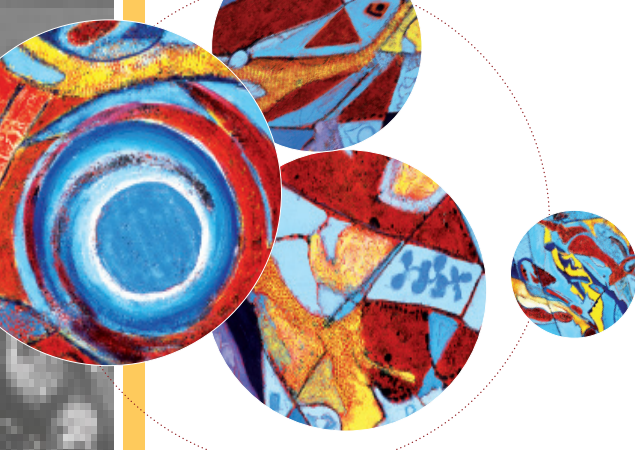


RSV / hMPV



Panel composition

The EQA panel for the detection of Respiratory Syncytial Virus consisted of 7 samples containing various concentrations of RSV Type A or B and 1 negative sample. The EQA panel for the detection of human Metapneumovirus consisted of 7 samples containing various concentrations of human Metapneumovirus Type A2 or B2 and 1 negative sample.

Material and methods

The QCMD panel was prepared using NucliSENS® easyMAG® (bioMérieux) for sample extraction with Specific B protocol (200/50).

Subsequently, the samples were analysed by real-time PCR using RSV/hMPV r-gene® (bioMérieux - ref.: 71-041) on Dx Real-Time System (Bio-Rad).

Results and discussion

		QCMD Results			RSV/hMPV r-gene® Results	
	Panel code	Sample Content	Sample Type*	Dilution factor	RSV Ct (530 nm)	hMPV Ct (560 nm)
Panel RSV 2013	RSV 13-01	RSV Type A	Educational	1.0 x10 ^{-6.5}	38.40	Negative
	RSV 13-02	RSV Type B	Core	1.0 x10 ^{-4.5}	31.81	Negative
	RSV 13-03	RSV Type B	Core	1.0 x10 ^{-3.5}	28.28	Negative
	RSV 13-04	RSV Type B	Educational	1.0 x10 ^{-5.5}	35.20	Negative
	RSV 13-05	RSV Type A	Core	1.0 x10 ^{-4.5}	32.02	Negative
	RSV 13-06	Negative	Core	-	Negative	Negative
	RSV 13-07	RSV Type A	Core	1.0 x10 ^{-5.5}	35.51	Negative
	RSV 13-08	RSV Type B	Core	1.0 x10 ^{-4.5}	31.84	Negative
Panel MPV 2013	hMPV 13-01	hMPV type B2	Core	1.0 x10 ^{-3.5}	Negative	29.89
	hMPV 13-02	hMPV type A2	Educational	1.0 x10 ⁻⁴	Negative	33.56
	hMPV 1303	hMPV type A2	Core	1.0 x10 ^{-2.5}	Negative	28.17
	hMPV 13-04	hMPV type B2	Core	1.0 x10 ^{-2.5}	Negative	26.69
	hMPV 13-05	Negative	Core	-	Negative	Negative
	hMPV 13-06	hMPV type B2	Educational	1.0 x10 ^{-4.5}	Negative	33.20
	hMPV 13-07	hMPV type A2	Core	1.0 x10 ⁻³	Negative	30.28
	hMPV 13-08	hMPV type A2	Core	1.0 x10 ⁻³	Negative	29.81

*«The QCMD EQA panels contain a range of samples, designed to look at different aspects of assay performance. Panel members are designated 'core proficiency samples' on the basis of scientific information, clinical relevance and clinical experience (...). Laboratories are expected to correctly analyse and report the core proficiency samples in order to show acceptable proficiency.» QCMD 2013 general announcement.
Consequently, the educational samples are considered as challenging due to very low concentrations. They are clearly detection limits.

- The 5 "Core" positive RSV samples of Panel RSV 2013 and the 5 "Core" positive hMPV samples from Panel MPV 2013 are detected with RSV/hMPV r-gene®.
- The "Core" negative sample of each panel are undetected as expected with RSV/hMPV r-gene®.
- All "Educational" samples (challenging samples) of each panel are detected with RSV/hMPV r-gene®.
- The results show the good sensitivity and specificity of the RSV/hMPV r-gene® - ref.: 71-041.

Sensitivity of RSV/hMPV r-gene®

Analytical sensitivity of the RSV/hMPV r-gene® (bioMérieux) has been evaluated through a limit dilution method of RSV A, hMPV A and hMPV B. The results indicate :

- 95% probability to detect hMPV A in a nasopharyngeal sample containing 2042 TCID₅₀/mL
- 95% probability to detect hMPV B in a nasopharyngeal sample containing 4467 TCID₅₀/mL
- 95% probability to detect RSV A in a nasopharyngeal sample containing 2 TCID₅₀/mL

"The data presented in this document illustrates the performance of the RSV/hMPV r-gene® assay when testing the Respiratory Syncytial Virus and the Metapneumovirus RNA EQA 2013 QCMD panels. The results are not representative of the QCMD EQA program report and full details on the QCMD EQA program can be obtained from the QCMD website (www.qcmd.org)".