

CERTIFICATE OF ANALYSIS

MolliScience® MSMG duplex qPCR Kit

1. Document Identification

Document Title: Certificate of Analysis
Product Name: MolliScience® MSMG duplex qPCR Kit
Product Type: Probe-based quantitative PCR assay kit
Lot / Batch Number: SG260701
Manufacturing Date: September 2026
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Document Number: COA-MSMG-duplex-QPCR-100-REV01
Revision: 1.0
Prepared by: MolliScience Kft.
Quality Review: MolliScience Kft.

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2. Description

This kit is an *in vitro* molecular assay for the detection and differentiation of *Mycoplasma synoviae* (MS) and *Mycoplasma gallisepticum* (MG) DNA. The kit distinguishes MS from MG strains using species specific genetic markers, and is applicable directly on DNA samples of clinical samples (e.g. tissue, swabs, secretions, cell cultures, FTA card) and isolates. The test is for veterinary use only and should be performed by qualified laboratory personnel.

3. Kit Components

Component	Cap Colour	Description	Quantity (per kit)	Storage
MSMG duplex qPCR Reaction Mix 1	white	Liquid ready-to-use PCR mix containing buffer, dNTPs and polymerase.	2 × [600 µL] (100 rx kit)	–20 °C
MSMG duplex qPCR Reaction Mix 2	yellow	Liquid ready-to-use PCR mix containing primers and probes (FAM, HEX).	1 × [500 µL] (100 rx kit)	–20 °C
MSMG duplex qPCR Reaction Mix 3	blue	Nuclease-free water. Used as a negative control (no-template control) also.	1 × 1 mL (100 rx kit)	–20 °C (or 2–8 °C)
MSMG duplex qPCR Positive Control	red	Ready-to-use DNA control (MS and MG target).	1 × [50 µL] (100 rx kit)	–20 °C

4. Manufacturing and Quality System

This product was manufactured in accordance with molecular diagnostic reagent manufacturing standards and internal SOPs for nucleic acid reagent production. All raw materials and reagents undergo qualification and incoming quality control prior to manufacturing.

5. Positive Control Performance

Fluorescence Channel	HEX (MS control)		FAM (MG control)	
Parameter	Cycle threshold (Ct) value	Maximum fluorescence threshold (RFU)	Cycle threshold (Ct) value	Maximum fluorescence threshold (RFU)
Specification	10 – 16	2500 – 4000	9 – 15	2500 – 4500
Result	13.12 – 14.00	2800 – 4000	12.33 – 13.28	3100 – 4100
Status	validation passed		validation passed	

6. Contamination Test

Parameter	Cycle threshold (Ct) value	
Fluorescence Channel	HEX	FAM
Specification	N/A	N/A
Result	N/A	N/A
Status	validation passed	validation passed

N/A: no amplification detected

7. Sensitivity Check

Positive Control template number	HEX (MS control)		FAM (MG control)	
	Cycle threshold (Ct)	Detection rate (%)	Cycle threshold (Ct)	Detection rate (%)
10 ⁷	13.12 – 14.00	100	12.33 – 13.28	100
10 ⁶	16.36 – 17.43	100	15.60 – 16.71	100
10 ⁵	19.39 – 20.51	100	18.85 – 19.85	100
10 ⁴	22.78 – 24.06	100	22.08 – 23.24	100
10 ³	26.06 – 27.20	100	25.30 – 27.00	100
10 ²	29.27 – 30.95	100	28.55 – 30.15	100
10 ¹ *	33.14 – 34.24	100	32.56 – 33.65	100
10 ⁰	35.64 – 37.68	75	34.58 – 36.53	75
Status**	validation passed		validation passed	

*Limit of detection (LOD).

**The assay passed validation, if at 10× LOD concentration detection is 100%.

8. Validation and Interpretation

Channel	Negative Control (Ct)	Positive Control (Ct)	Interpretation
FAM	N/A	9 – 15	Controls worked.
HEX	N/A	10 – 16	
FAM	N/A	9 – 15	Problem with Amplification. Repeat run after Troubleshooting.
HEX	N/A	N/A	
FAM	N/A	N/A	
HEX	N/A	10 – 16	
FAM	N/A	N/A	
HEX	N/A	N/A	
FAM	≤40	9 – 15	Possible contamination. Repeat run after Troubleshooting.
HEX	≤40 or N/A	10 – 16	
FAM	≤40 or N/A	9 – 15	
HEX	≤40	10 – 16	

N/A: no amplification detected

9. Quality Assurance Approval

Role	Name	Signature	Date
QA Manager	Zsuzsa Kreizinger, DVM, PhD		16/09/2026

10. Symbols glossary



Protect from light