

Certificate of Testing

Applicant	Customer	SukJoo Kim	Phone	010-5967-7210
	Company	Zoono Korea, Co., Ltd.	e-Mail	james1828@naver.com
	Address	Gogol-ro 289 Bun-gil 60, Hanam-Si, Keyonggi-Do		
Test	Virus inactivation			
Samples	Germfree24, Microbe Shield : 2EA			
Test Virus	Influenza A virus (H3N2) strain Hong Kong		Cell Line	MDCK Cell
Test No.	17DI174(A)		Test Period	Nov. 24 ~ Nov. 28 (4 d)
Sample Condition	Liquid			-
Reaction Time	5 Min, 60 Min.		Titration	CPE/MTT
Test Temperature	Room Temperature (~23°C)		Experimenter	Dahye Kim, Chong-Kyo Lee

TEST RESULT

Summary of the results (liquid sample and virus)

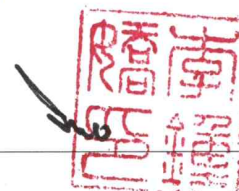
Exp. No	Sample Name Concent.		Virus Name Concent.		Virus reduction			
					%		log	
					5 min	60 min	5 min	60 min
17DI174	No sample (H ₂ O 90%)	0%	FluA	10%	0.00%	0.00%	<0.00	<0.00
17DI174	Germfree24	90%	FluA	10%	>99.951%	>99.951%	>3.31	>3.31
17DI174	Microbe Shield	90%	FluA	10%	>99.900%	>99.900%	>3.00	>3.00

* Conclusion : After 5 minutes reaction with virus and 90% of Germfree24 or Microbe Shield, over 99.9% (>3.00 log) of virus reductions were observed.

Dec. 5 2017

Korea Research Institute of Chemical Technology
Virus Research and Testing Center

Test Person In Charge : Chong-Kyo Lee



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Table 1. Virus Assay (CCID₅₀/well) and Reduction Ratio(%)

Exp. No	Sample		Virus		Virus titer (CCID ₅₀ /well)		Virus reduction (%)	
	Name	Concent.	Name	Concent.	5 min	60 min	5 min	60 min
17DI174	No sample (H ₂ O 90%)	0%	FluA Mock	10%	316,200 <1.0	316,200 <1.0	0%	0%
17DI174	Germfree24	90%	FluA Mock	10%	<156 156	<156 156	>99.951%	>99.951%
17DI174	No sample (H ₂ O 90%)	0%	FluA Mock	10%	316,200 <1.0	316,200 <1.0	0%	0%
17DI174	Microbe Shield	90%	FluA Mock	10%	<316 316	<316 316	>99.900%	>99.900%

Table 2 . Virus Assay and Reduction Ratio (Log Value)

Exp. No	Sample		Virus		Virus titer (log CCID ₅₀ /well)		Virus reduction (log)	
	Name	Concent.	Name	Concent.	5 min	60 min	5 min	60 min
17DI174	No sample (H ₂ O 90%)	0%	FluA Mock	10%	5.50 <0.00	5.50 <0.00	0.00	0.00
17DI174	Germfree24	90%	FluA Mock	10%	<2.19 2.19	<2.19 2.19	>3.31	>3.31
17DI174	No sample (H ₂ O 90%)	0%	FluA Mock	10%	5.50 <0.00	5.50 <0.00	0.00	0.00
17DI174	Microbe Shield	90%	FluA Mock	10%	<2.50 2.50	<2.50 2.50	>3.00	>3.00