

Microbial Sampling Guide*

2021

VIABLE (CULTURABLE) SAMPLES^A (INCLUDES FUNGI AND BACTERIA)

SAMPLE TYPE		FIELD EQUIPMENT	SUGGESTED SAMPLING	MEDIA	UNITS
Air Sample	Air	*Andersen or Aerotech single or multistage sampler	2 - 5 minutes @ 28.3 lpm	MEA, CMA, DG18, CEL (fungi)	cfu/m³
		*Calibrated high-volume pump		TSA, NA, MCTA (bacteria)	
		*Agar plates			
	Wall Cavity	*Wall-check TM kit	1 - 2 minutes @ 10 lpm	MCE or PVC cassette	cfu/m³
Bulk Sample	Bulk	*Bulk sampling kit	Collect ~ 2 sq. in.	Sterile Container	cfu/g
	Swab	*Sterile swab kit	Wipe (1 - 4) square in.	Culturette II	cfu/in²
	Dust/Surface	*Micro-vacuum kit	Vacuum all surface dust	MCE or PVC cassette	cfu/g
			Vacuum known area		cfu/in²
Water Sample (bacteria only)		*Sterile container	Collect 500 ml of water	Sterile container	ml
			Transport to lab w/in 24 hrs.		

^A Culturable samples are incubated for 7 - 14 days to allow fungi/bacteria growth needed for species identification and sample quantification.

NON-VIABLE (NON-CULTURABLE) SAMPLES^C (INCLUDES FUNGI ONLY)

SAMPLE TYPE		FIELD EQUIPMENT	SUGGESTED SAMPLING	MEDIA	UNITS
Air Sample	Air	*Calibrated high-volume pump & Zefon Cassette	10 minutes @ 15 lpm	Air-O-Cell™	Spores/m³
		*Burkhardt or Allergenco samplers	Varies	Greased slides	
	Wall Cavity	*Wall-check™ kit	30 seconds – 2 minutes @	Air-O-Cell™	Spores/m ³
		*Calibrated high-volume pump	15 lpm		
Bulk Sample	Bulk	*Sealed container	Collect 2 sq. in.	N/A	T, M, M, A ^D
	Bulk/Dust	*Tape lift kit	1-2 cm ²	Tape lift slide	T, M, M, A ^D

^c Direct examination of a sample can provide faster results, but does not provide species and certain genus identification, or quantification for bulk samples.

^B ACGIH recommends a 3-plate sampling plan (e.g. MEA, CMA, DG18) for every sample, but does not specify media. Contact us for additional help in selecting appropriate media.

^D Trace, Minor, Major, Abundant

^{*}These are suggested techniques based on generally accepted industry practices. Currently, there are no published regulatory methods relating to sampling or analysis. Each investigation may require a combination of these, or other available techniques based on site conditions being evaluated.

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