

3M™ Petrifilm™ Plates characteristics

Petrifilm plates	Culture media	Coloring dye	pH	Surface/ inoculum volume	Counting interval
Total plate count PAC ✓	Modified PCA	TTC (chloride 2,3,5 triphenyltetrazolium)	6.6 - 7.2	20 cm²/1 ml	10 – 300
Enterobacteriaceae PEB ✓	Modified VRBG	TTC + pH indicator	6.5 - 7.5	20 cm²/1 ml	15 – 100
Coliform PCC ✓	Modified VRBL	TTC	6.6 - 7.2	20 cm²/1 ml	15 – 150
High-Sensitivity Coliform HSCC ✓	Modified VRBL	TTC	6.5 - 7.5	60 cm²/5 ml	15 – 150
Select E. coli SEC ✓	Not communicated	BCIG (5 bromo, 4 chloro, 3 indolyl D-glucuronide)	6.5 - 7.5	20 cm²/1 ml	15 – 150
E. coli & Coliform PEC ✗	Modified VRB	TTC BCIG (5 bromo, 4 chloro, 3 indolyl D-glucuronide)	6.6 - 7.2	20 cm²/1 ml	15 – 150
Staph Express STX ✓	Modified Baird-Parker	Test Petrifilm: Not communicated Disk: O-Toluidine blue	6.0 - 8.0	30 cm²/1 ml	15 – 150 characteristic 300 total number of colonies
Environmental Listeria PEL ✗	Not communicated	Not communicated	4.0 - 9.0	42 cm²/3 ml	15 – 150
Yeast and Mold PYM ✗	Modified Sabouraud + Antibiotics (chloramphenicol + chlorotetracycline)	BCIP (phosphatase indicator)	N/A	30 cm²/1 ml	15 – 150
Lactic Acid Bacteria LAB ✓	Not communicated	Not communicated	N/A	30 cm²/1 ml	15 – 150
Rapid Aerobic Count RAC ✓	Not communicated	Not communicated	N/A	30 cm²/1 ml	10 – 300
Rapid Yeast and Mold RYM ✓	Not communicated	Not communicated	N/A	30 cm²/1 ml	15 – 150
Rapid Coliform RCC ✓	Modified VRBL	TTC + pH indicator + growth activator	6.5 - 7.5	20 cm²/1 ml	15 – 150

AFNOR certified methods, according to ISO 16140

Petrifilm plate	Scope	Temperature/Time	Interpretation (following AFNOR certification, ISO 16140)
Total plate count PAC	1 All human food products, pet food and environmental samples 72h 2 All human food products, pet food, environmental samples, except dairy products and raw shellfish 48h 3M 01/1-09/89	30°C ± 1°C 72h ± 3h 30°C ± 1°C 48h ± 3h	As compared to reference method ISO 4833: All red colonies (no matter size, or intensity of the colouration)
Enterobacteriaceae PEB	All human food products, animal feed (pet food and animal breeding stuffs) and environmental samples 3M 01/6-09/97	30°C or 37°C ± 1°C 24h ± 2h	As compared to reference method ISO 21528-2: Red colonies with gas bubbles; red colonies with a yellow halo; red colonies with a yellow halo and gas bubbles = Enterobacteriaceae Red colonies without gas bubbles and without yellow halo are not Enterobacteriaceae No confirmation step to perform
Select E. coli SEC	All human food products, pet food and environmental samples 3M 01/08-06/01	42°C ± 1°C 24h ± 2h	As compared to reference method ISO 16649-2: All blue colonies blues (no matter size, or intensity of the colouration)
Staph Express STX	All human food products and pet food 3M 01/09-04/03 A 3M 01/09-04/03 B	37°C ± 1°C 24h ± 2h Disk: 37°C ± 1°C 3h	As compared to reference methods ISO 6888-1/A1 3M 01/09-04/03 A ISO 6888-2 3M 01/09-04/03 B Without disk: violet colonies With disk: pink halos
Rapid Yeast and Mold RYM	All human food products, animal feed (pet food and animal breeding stuffs) and environmental samples 3M 01/13-07/14	25°C or 28°C ± 1°C 60 à 120 h	As compared to reference methods ISO 21527-1 et 21527-2 See Instructions for use/ Interpretation Guide
High-Sensitivity Coliform HSCC	All human food products 3M 01/07-03/99	TC: 30°C ± 1°C 24h ± 2h	As compared to reference method ISO 4831: Count red colonies with gas bubbles only
Coliform PCC	All human food products, pet food and environmental samples, except raw shellfish 3M 01/2-09/89 A	TC: 30°C or 37°C ± 1°C 24h ± 2h	As compared to reference method ISO 4832: All red colonies, with or without gas bubbles 3M 01/5-09/89 A
	All human food products, except raw shellfish 3M 01/2-09/89 B	TC: 30°C or 37°C ± 1°C 24h ± 2h	As compared to reference method ISO 4831: Red colonies with gas bubbles only 3M 01/5-09/89 B
	All human food products 3M 01/2-09/89 C	FC: 44°C ± 1°C 24h ± 2h	As compared to reference method NF V08-060: All red colonies, with or without gas bubbles 3M 01/5-09/89 C

Continued overleaf

Petrifilm plate	Scope	Temperature/Time	Interpretation (following AFNOR certification, ISO 16140)
Rapid Coliform RCC	All human food products, except delicatessen and seafood products Delicatessen and seafood products 3M 01/5-03/97A	35°C ± 1°C 14h ± ½ h 30°C ± 1°C 14h ± ½ h	14h, as compared to reference method ISO 4832: yellow halo with or without a visible colony 3M 01/5-03/97A After 24h of incubation, yellow halos are no longer taken into account for interpretation
	All human food products, except delicatessen and seafood products Delicatessen and seafood products 3M 01/5-03/97B	35°C ± 1°C 24h ± 2h 30°C ± 1°C 24h ± 2h	24h, as compared to reference method ISO 4832: all red colonies, with or without gas bubbles 3M 01/5-03/97B After 24h of incubation, yellow halos are no longer taken into account for interpretation
	All human food products, except delicatessen and seafood products Seafood products Note: delicatessen products are not certified for this part 3M 01/5-03/97C	35°C ± 1°C 24h ± 2h 30°C ± 1°C 24h ± 2h	24h, as compared to reference method ISO 4831: red colonies with gas bubbles only 3M 01/5-03/97C After 24h of incubation, yellow halos are no longer taken into account for interpretation.
Rapid Aerobic Count RAC	Liquid dairy products Dry dairy products	30°C ± 1°C 28h ± 2h 48h ± 3h	As compared to reference method ISO 4833: All colonies, no matter size, nature and intensity of the color
Yeast & Mold PYM	No AFNOR/ISO 16140 certification	25°C ± 1°C 3 à 5 days	See Instructions for use/ Interpretation Guide
Lactic Acid Bacteria LAB	All human food products (excluding yogurts) by performing assays on a broad range of foods, and environmental samples 3M 01/19-11/17	30°C ± 1°C 48h ± 3h	As compared to reference method ISO 15214: All red colonies

TC = Total Coliforms

FC = Fecal Coliforms