

Schematic diagram of culture procedure for low-acid canned food & high acid canned food

Flat sour spoilage:

10^{-1} $\xrightarrow{1\text{ml}}$ Tryptone glucose agar + Bromocresol purple \longrightarrow

55° incub. 3-7 days.

\longrightarrow

Thermophilic anaerobic spoilage:

10^{-1} $\xrightarrow{1\text{ml}}$ Dextrose trypton agar PE2 + Wax 55° incub. 3-7 days.
Bromocresol purple \longrightarrow \longrightarrow

37° \searrow \longrightarrow

Sulphatid spoilage:

10^{-1} $\xrightarrow{1\text{ml}}$ Thioglycolate agar + Wax 55° incub. 3-7 days.
Nail \longrightarrow \longrightarrow

37° \searrow \longrightarrow

Swell spoilage:

10^{-1} $\xrightarrow{1\text{ml}}$ Glucose broth + Wax 37° incub. 3-7 days.
phenol red \longrightarrow \longrightarrow

\searrow \longrightarrow

37c°

Butyric anaerobic:

10⁻¹ 1ml Dextrose trypton agar PE2 37c° 3-7 days.
 → → →

Aciduric thermophilic:

10⁻¹ 1ml Tryptone glucose agar + 55c° 2 days.
 → Bromocresol PH=5 → →

Yeast:

10⁻¹ YEA + Bromocresol PH=5 25-30c° 3-7 days.
 → → →

Mold:

10⁻¹ water bath 80c°/15min cool YEA 25-30/ 3-7 days.
 → → → →

Spoilage micro. That cause low & high acidity in Various vegetable & fruit:

Spoilage type	PH	Example	Group of micro.	Manifestation
Thermophlic Flat sour	5.3 ≥	Corn , Peas	Bacillus Sterothermophilum	Can flat , Product appearance may have slightly abnormal odor , sometimes cloudy liquor

Thermophilic anaerobic sp.	4.8 ≥	Spinach , Corn	Clostridium Saccharolyticum	Can swell , product appearance fermented , sour , Cheesy odor
Sulphid sp.	5.3 ≥	Corn , Peas	Clostridium ngrificanse	Can flat , H ₂ S gas absorbed by product
Mesophilic Swell sp.	4.8 ≥	Corn	Clostridium botulinum	Can swell , product may be partially digested
Butyric anaerobic	4.0 ≥	Tomatos , Peas	Clostridium pasturanium	Can swell , product fermented butyric odor
Aciduric thermophilic	4.2 ≥	Tomato juice	Bacillus coagulans	
Yeast	3.7 ≤		Saccharomyces	
Mold	3.7 ≤	Fruits	Byssochlamys fulva	