

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

55c° $\xrightarrow{\text{incub.}}$ 3-7 days.

Thermophilic anaerobic spoilage:

10^{-1} $\xrightarrow{1\text{ml}}$ Dextrose trypton agar PE2 + $\xrightarrow{\text{Wax}}$ 55c° $\xrightarrow{\text{incub.}}$ 3-7
days. Bromocresol purple \longrightarrow 37c°

Sulphatid spoilage:

10^{-1} $\xrightarrow{1\text{ml}}$ Thioglycolate agar + $\xrightarrow{\text{Wax}}$ 55c° $\xrightarrow{\text{incub.}}$ 3-7 days.
Nail \longrightarrow 37c°

Swell spoilage:

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

Butyric anaerobic:

10^{-1} $\xrightarrow{1\text{ml}}$ Dextrose trypton agar PE2 $\xrightarrow{37\text{c}^\circ}$ 3-7 days.

Aciduric thermophilic:

10^{-1} $\xrightarrow{1\text{ml}}$ Tryptone glucose agar + $\xrightarrow{55\text{c}^\circ}$ 2 days.
 Bromocresol PH=5

Yeast:

10^{-1} $\xrightarrow{\quad}$ YEA + Bromocresol PH=5 $\xrightarrow{25-30\text{c}^\circ}$ 3-7 days.

Mold:

10^{-1} $\xrightarrow{\quad}$ water bath $80\text{c}^\circ/15\text{min}$ $\xrightarrow{\text{cool}}$ YEA $\xrightarrow{25-30}$ 3-7 days.

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

Spoilage type	PH	Example	Group of micro.	Manifestation
Thermophilic Flat sour	$5.3 \geq$	Corn , Peas	Bacillus Sterothermophilum	Can flat , Product appearance may have slightly abnormal odor , sometimes cloudy liquor
Thermophilic anaerobic sp.	$4.8 \geq$	Spinach , Corn	Clostridium Saccharolyticum	Can swell , product appearance fermented , sour , Cheesy odor
Sulphid sp.	$5.3 \geq$	Corn , Peas	Clostridium nigrificanse	Can flat , H ₂ S gas absorbed by product
Mesophilic Swell sp.	$4.8 \geq$	Corn	Clostridium botulinum	Can swell , product may be partially digested
Butyric anaerobic	$4.0 \geq$	Tomatos , Peas	Clostridium pasturarium	Can swell , product fermented butyric odor
Aciduric thermophilic	$4.2 \geq$	Tomato juice	Bacillus coagulans	
Yeast	$3.7 \leq$		Saccharomyces	
Mold	$3.7 \leq$	Fruits	Byssochlamys fulva	