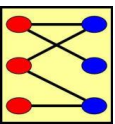
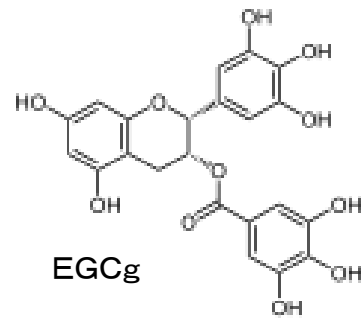


# What is a “Catechin-micelle<sup>®</sup>”

1. Nano-size micelles of epigallocatechin-gallate (EGCg) dispersed in vegetable oil
  - Utilizing the high polarity of vegetable oil, EGCg, which is usually insoluble in oil, was given a micelle structure and dispersed in oil by our patented method.
  - The result was a functional oil containing stably dispersed nano-size Catechin-micelles.
2. Drug form
  - Colorless and transparent (pale red at high concentrations)
  - Tasteless and odorless
  - Polarity is similar to that of water (medium-chain fatty acid)
3. Characteristics
  - Coexistence of oil-soluble and water-soluble forms of catechin
  - The effects of catechin are exerted more strongly and widely
  - Harmless (rather beneficial) to the human body
  - Catechin is effective for a long term



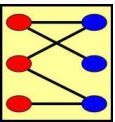
# What is EGCg

1. EGCg is the most abundant catechin, an active polyphenol, contained in tea leaves.
2. EGCg has many physiological functions (antioxidant activity, antibacterial activity, anticancer activity, antiviral activity, cholesterol synthesis- inhibiting activity, enzyme-inhibiting activity, deodorizing activity, immunopotentiating activity and skin anti-aging activity).
3. According to the study by the Ministry of Health and Welfare, tea-drinking habit (uptake of EGCg) is effective in preventing aggravation of prostatic cancer.

A kind of esterified gallic acid

Gallic acid: Due to strong reducing power, used as antioxidant for industrial products such as photograph developer, and as additives to oil and butter to prevent oxidation.

Demerit: Due to its strong antioxidant activity, EGCg is oxidized soon after exposure to light, water, air, etc., and its activity is not stable.



# Data on water-soluble EGCg before solubilized in oil

## Antibacterial activity of epigallocatechin gallate (EGCg)

Strain of bacteria tested		Minimum growth-inhibiting concentration ( $\mu\text{g}/\text{ml}$ )	Medium
1 <i>Staphylococcus epidermidis</i>	表皮ブドウ球菌	100	Muller Hinton
2 <i>Staphylococcus aureus</i>	黄色ブドウ球菌	100	Muller Hinton
3 <i>Staphylococcus aureus</i> ATCC25923	黄色ブドウ球菌	320	
4 <i>Staphylococcus aureus</i> IAM1011	黄色ブドウ球菌	250	
5 <i>Streptococcus mutans</i> MT8148	虫歯菌	2000	Brain Heart Infusion
6 <i>Streptococcus sobrius</i> 6715G	虫歯菌	1000	Brain Heart Infusion
7 <i>Streptococcus pneumoniae</i>	肺炎球菌	500	Cation adjusted Mueller Hinton broth
8 <i>Candida albicans</i> ATCC90029	カンジダ	125	NaPB-RPMI
9 <i>Candida albicans</i> ATCC96901	カンジダ	15.6	NaPB-RPMI
10 <i>Candida albicans</i> ATCC90028	カンジダ	250	NaPB-RPMI
11 <i>Candida albicans</i> ATCC200955	カンジダ	62.5	NaPB-RPMI
12 <i>Vibrio cholerae</i> O1 classical Inaba 569B	コレラ菌	2500	
13 <i>Bacillus subtilis</i> IAM12118	耐熱性有芽胞細菌	500	Standard Methods Agar
14 <i>Bacillus stearothermophilus</i> IFO12550	耐熱性有芽胞細菌	200	
15 <i>Bacillus cereus</i> JCM2152	セレウス菌	600	
16 <i>Vibrio metschnikovii</i>		45	
17 <i>Vibrio fluvialis</i> JCM3752		200	
18 <i>Vibrio parahaemolyticus</i> IFO12711	腸炎ビブリオ	400	
19 <i>Vibrio metschnikovii</i> IAM1039		1000	
20 <i>Clostridium perfringens</i> JCM3816	ウェルシュ菌	300	
21 <i>Clostridium botulinus</i> A,B mix	ボツリヌス菌	100	
22 <i>Helicobacter pylori</i> ATCC43629	ピロリ菌	50	Brucella HK agar +10% horse blood
23 <i>Helicobacter pylori</i> ATCC43579	ピロリ菌	50	Brucella HK agar +10% horse blood
24 <i>Helicobacter pylori</i> ATCC43526	ピロリ菌	50	Brucella HK agar +10% horse blood
25 <i>Plesiomonas shigelloides</i> IID No.3		100	
26 <i>Aeromonas sobria</i> JCM 2139		300	

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