

가

- . (3) -

2. 가

2.1

2.1.1

1)

“ 가?

. “ ” “ ”, “ ”, “가 ”
.

surface active agent , “ () ” .

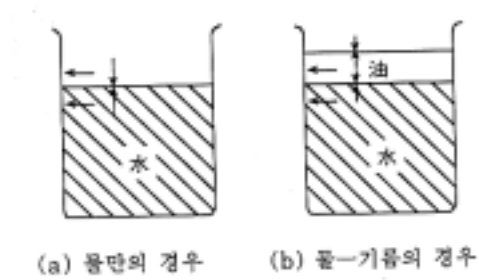
2 , ,

가 .

() - (), () - (), () - () [2.1(a)],

() - (), () - (), () - () [2.1(b)].

가 .

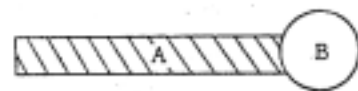


< 2.1 >

2)

< 2.2>

A (H₃C-CH₂-CH₂ ·
· · CH₂-)
,
B carbon , sulfon (-COONa, -SO₃Na)
,



A : 疎水基

B : 親水基

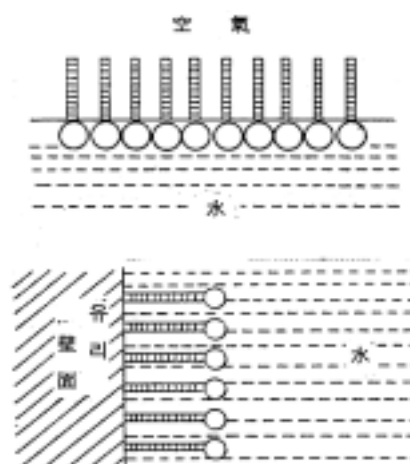
< 2.2>

A (), B

2

< 2.3>

- , -



< 2.3>

가

가

2

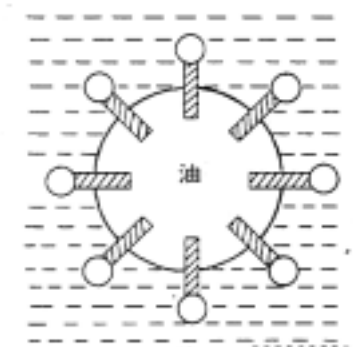
가 -

< 2.4>

가

dyne/cm

() ()



< 2.4>

2.1.2

1) ,

< > , ,
가 . -
가 , 가
가 .
< > ,
.

2) ,

,
(emulsion) , -
(dispersion) . 2
,
. W/O(water in oil) O/W(oil
in water) 2 가 .

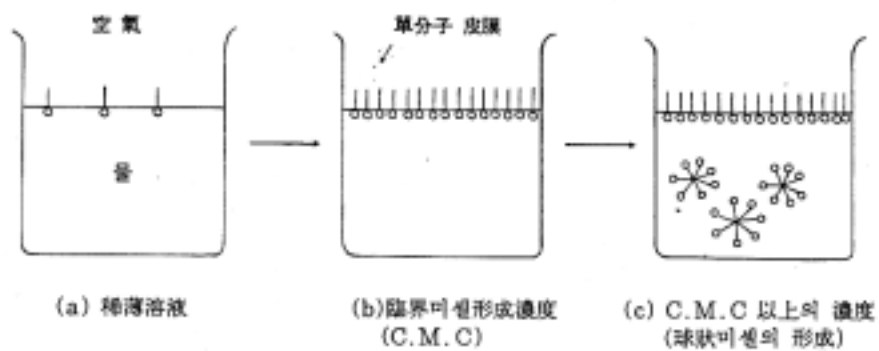
3) 가

가 C.M.C

. 가
가 가
가 . ‘ ,
가
(micell) .

C.M.C(Critical Micelle Consentration) .

가
가
가



< 2.5>

C.M.C

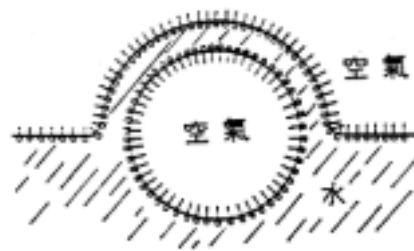
4)

가 가 , 가
, ()
가 , 가 < 2.6>

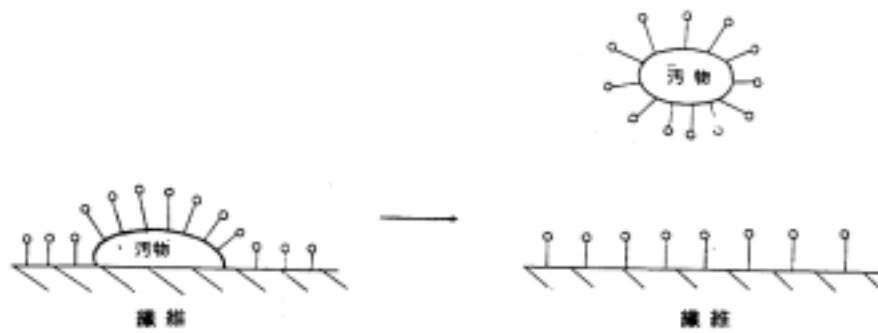
(,) Na
CH₃(CH₂)₇CH = CH(CH₂)₇COONa()

< 2.7>

가



< 2.6 >



< 2.7 >

2.1.3

4가

- (1) (anion)
- (2) (cation)
- (3)

(4)

(+) , (-)

.

.

1)

,

.

.

carbon

ester

sulfon

ester

(1) Carbon (-COONa)

.

-COONa_{1/2}, -COOMg_{1/2}

, 가

.

.

Lauric acid sodium(C₁₁H₂₃COONa)

,

.

Stearic acid sodium(C₁₇H₃₅COOHNa)

가 18

-COONa

가

.

.

Oleic acid sodium(C₁₇H₃₃COONa)

가 18

,

2

.

(2) ester (-OSO₃Na)

(-OH) (, chlorosulfon ,
sulfamine) .



C₁₂~C₁₈ 가 ,
 . (C₁₂H₂₅OH, C₁₆H₃₃OH, C₁₈H₃₅OH,
C₁₈H₃₇OH) 1 .

1 (oxo alcohol, second oxo alcohol)

, . alkylether ester
(가), (2

) (2 olefin)

, .

(3) sulfon (-SO₃Na)

,
 가 ,
 .

alkylbenzene sulfon (ABS)

Igepon T [(RCON(CH₃)-CH₂CH₂-SO₃Na)

Aerosol OT (RCOOCH₂CH(SO₃Na)OOCR sulfobernstein saureester
)

ABS dodecyl benzene sulfonate(C₁₂H₂₅C₆H₄SO₃Na)가

, (BOD) alkyl 가

, LAS(linear alkyl benzene sulfate),

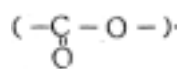
alkylbenzenesulfon (ABS, soft ABS) .
 naphthalenesulfon -formalin Tamol() ,
 Nekal() .

Igepon T 가 , 가 .

Aerosol OT , sulfobernstein saure-ester

, ,

Aerosol OT

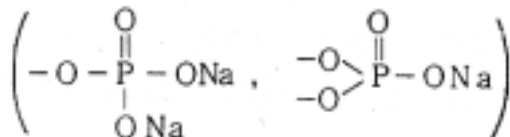


,

가

.

(4) ester



,

.

.

, monoester , diester .

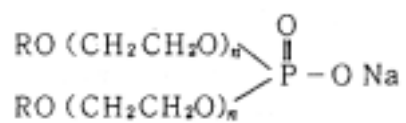
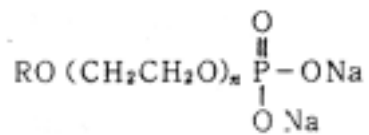
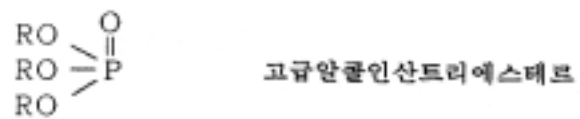
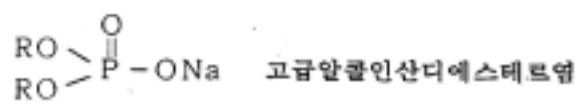
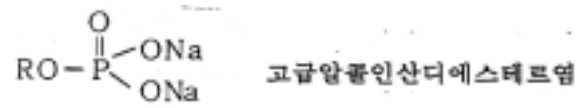
,

.

.

monoester/diester , ,

가



2)

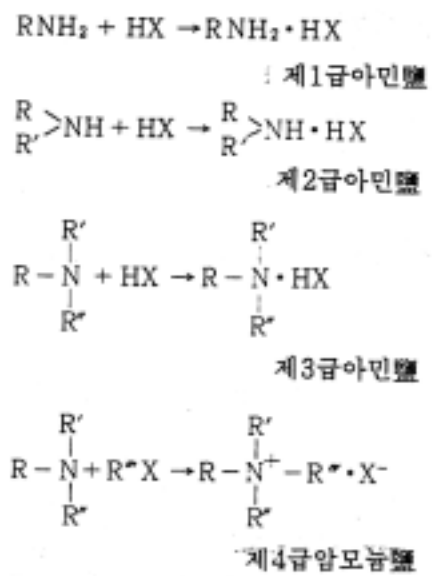
cation (+)

alkyl

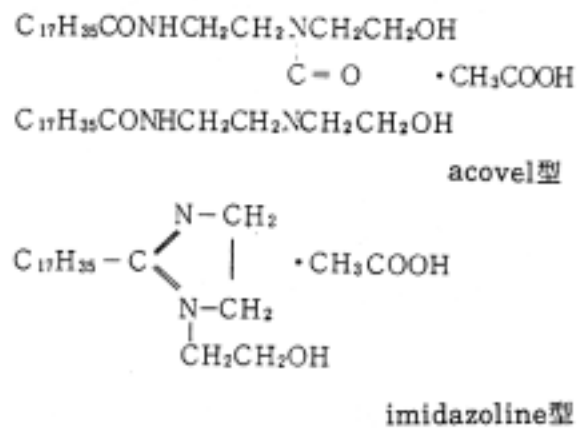
. Alkylamine

1 , 2 , 3 , (, ,) 1 , 2 , 3 .

· Amine



· cation



3 [alkylhalide(RX), benzylchloride  CH₂Cl
dimethyl (CH₃)₂SO₄] 4 .

3 4

, .

acovel imidazoline

.

3)

-(CH₂CH₂)-_n , (-OH)

. 가

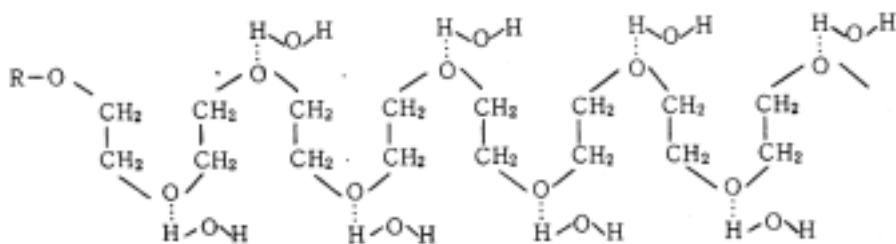
-O- 가 ()

. , () 가

가 가 .

(clouding point, C.P.) .

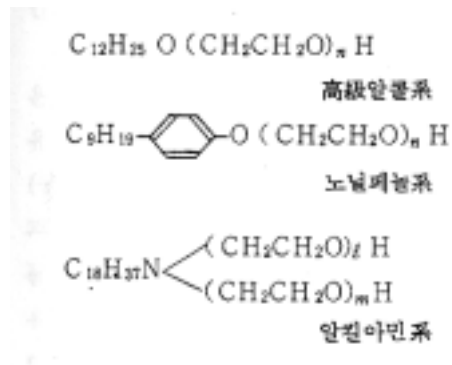
가



(1) Polyethyleneglycol

(R OH), alkylphenol(R OH) alkylamine(R-NH₂)

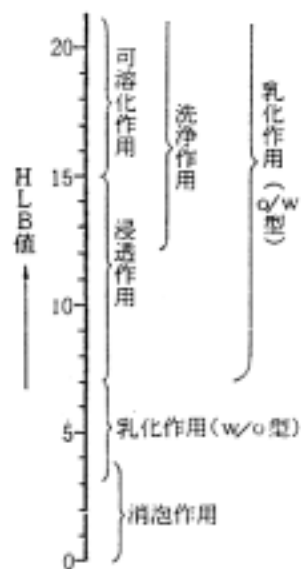
가 , .



가 (mole)

가 , , ,

, .

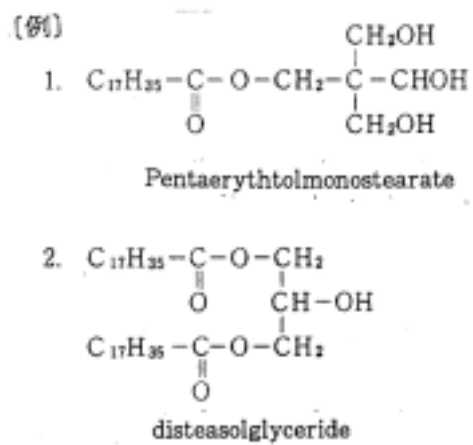


< 2.8> HLB

HLB 가 , 1 ,
 20 가 . HLB
 < 2.8> .
 HLB C.P
 , 가 ,
 .

(2) 가alcohol

(), ,
 sorbitol, pentaerythtol 가 , 가
 -Ohdrl ,
 가



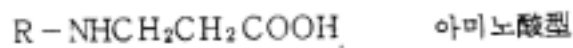
4)

, betaine

< 2.1> 가



가



, betaine

가

pH

.