

(19) (KR)
(12) (B1)

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(24) 2001 03 21

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(22) 1994 01 05 (43) 1994 08 16

(30) P43 00 140.8 1993 01 06 (DE)

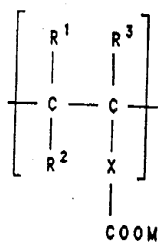
(73) ,
- 65929 50

(72) - 63150 95
- 65817 / 31
- 35647 2

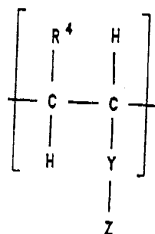
(74)
:

(54) , ,
가

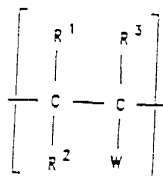
- A) (A) 1 99 % ;
- B) (B) 99 1 % ;
- C) (C) 0 40 %;
- D) (D) 0 40 % ,



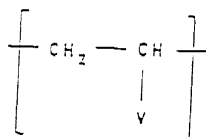
(A)



(B)



(C)



(D)

, R^1 , R^2 , R^3 , R^4 , X, M, Y, Z, W V

[]

가

[]

가 가

1. ((tanning)),

2. 가 (top finishing) (, - , 가 (加 (脂)))

3. 가 (가 ,).

1. (lime pit) , (),

2. 가 가 ()

3. (,) ().

가 , 가 , 가 가 , 가

가 (加脂劑) .

136,641 $C_{12} - C_{24}$ 1가 $C_6 - C_{20}$, 가 가

34 24 902 $C_8 - C_{24}$
 , 가 5 100 %

가 100 (, 60 100 247 490 (sp
erm oil))
 , : 9:1 1:4 .

=50 100) , 34 37 443 (> 20) , (, 가

, , 가 가 가

, 가 , 가 가 가 , 가
 , / , / .

1

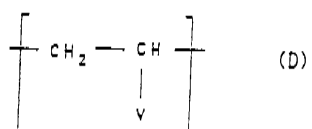
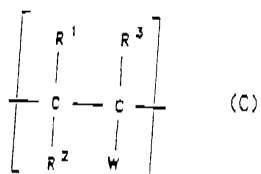
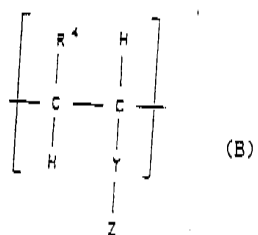
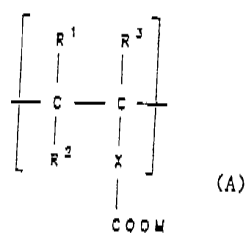
가 / 가

A) (A) 1 99 %,

B) (B) 99 1 %,

C) (C) 0 40 %

D) (D) 0 40 %



1가 -, 2가 - / 3가 - 가 . 1가 $C_1 - C_{36}$,
 $C_1 - C_5$ (: , , n - n - 3 -)
 $C_{10} - C_{36}$ (: , n - , n - , n - ,)
. 1가 (: ,) . 2가
 $C_2 - C_6$ (:) . 3가

36

$$C_4 - C_{24} \quad (: \quad)$$

: " L. and M. Fieser, Lehrbuch der organischen Chemie(Textbook fo Organic Chemistry), Verlag Weinheim GmbH, 1955" and " Dr.H. Gnamm, Die Fettstoffe des Gerbers(The Fats of the Tanner), Wiss. Verlags gesellschaft m.b.H. Stuttgart (1943)"].

(A) $C_4 - C_{18}$.

$$\text{HN(R}^5)_2 \quad (\quad , \text{R}^5 \quad) \quad 1 \quad 2$$

$$\text{C}_1 - \text{C}_5 \quad \text{C}_1 - \text{C}_3 -$$

(C0) $C_1 - C_{10}$ 가 $C_1 - C_5$ 와 $C_1 - C_3$ 가 .

(D) (:), (:), (:), - N
- (: - N -) . 가
1 30, 4 28, 4 24 . ,
, , , ,
가 , C₁ - C₇ 가 .
가 .

(A), (B), (C), (D)

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

가 ,
가 . , 가
.
, , [: (:
) , (:
3 - 2 -), (: 3 -
, 3 - - 2 - , 3 - 3 -
) , (: 2,2 - (3 -)), (: , - 3 -
- 3 -), (: 3 -
) (: 2,2' - - (), 3,4 - - 3,4 -
2,3 - - 2,3 -)]

, 0.1 20 %, 0.2 15 % .
50 가 200 , 100 180
가 , 가 .

, , , , 가
(: , , , ,) (redox) 가
0.1 2,000 ppm, 0.1 1,000 ppm .
2

, 0.1 10 % (: - 1 - - 3 -
) (: 3 - , n - n -) .
(Mw) 1,000 10,000, 1,000 5,000 .
, (anchor), (blade), (impeller)
(impulse counter - current stirrer)가 , ,
(cascade)가 .

가

가 , , , 5 15 ,

가

가

가 가

가

(: , 가)가

 $C_1 - C_6$

가

5

15

가

가

가

100

20

80

20

40

"

"

가

20

40

%

가

 $C_2 - C_3$

pH

7.0

7.5

, / , / 가

" "

20

50

%

pH

7.0

7.5

pH

가

6.0

6.9

가

가

가

(: , 가)가

가

가

가

[가 (, IN)]

[1]

(IN=121) 120g

25g

130 가

-3 -

2g

가

130

2

80

80

(33

%

) 25g

가

. pH

7.0

7.2

,

216g

가

,

2

5

50

[2 6]

(IN=111),

(IN=12),

(IN=79),

(IN=75)

(IN=52)

1

[7]

(IN=90) 72g 3 - 0.45g 130 가 .
 16g - 3 - 2g 10 가 , 130
 3 80 90 (33 %
) 30.3g 가 . ^1H - NMR ($\text{D}_2\text{O}/\text{CD}_3\text{OH}$ 1:1)
 B A 가 97:3 .

[8 9]

(IN=54) (IN=97) 7

[10]

(IN=52) 60g 60g , 25g 130 가 . -
 3 - 2g 5 가 , 2 22.5g 가 , 80
 80 90 , (33 %)
 2 275g .

[11]

(IN=20) 10 .

[12]

(IN=52) 120g, 25g 7g 130 가 . - 3 -
 5g 5 가 , 130 135 가 2
 , 90 . (33 %) 27.3g 가 ,
 189.7g 가 , 80 90 가 3 .

[13 17]

(IN=121), (IN=129), (IN=79), (IN=111) (IN=75)
 12 .

[18]

(IN=97) 120G, 25g n - 7g 130
 가 . - 3 - 2g 5 가 . , 가
 3 , 90 (33 %) 26.3g 200g 가 ,
 80 90 가 3 .

[19 20]

(IN=90) (IN=54) 18 .

[21]

(IN=97) 120g, 25g, 10g - 3 - 2g
 150 가 , 2 , 80 90 ,
 (33 %) 32.7g (60 70) 100g 가 , 80 90 2 ,
 , 3g 가 pH 6.6 6.9 , 94.8g
 .

[22]

(IN=90) 120g, 30g, 5g - 3 - 2g
 150 가 , 3 , 85 95 ,
 (33 %) 43.7g (60 70) 90g 가 , 80 90 2 ,
 , 4.3g 가 pH 6.5 , 92.5g
 .

[23]

(in=90) 60g, (IN=52) 60g, 15g, 15g - 3 - 2g
 160 가 , 3 , 80 90 ,
 (33 %) 48.5g (60 70) 93g 가 , 80 90
 2 , 7.4g 가 pH 6.6 , 76.1g
 .

[24]

(IN=75) 40g, (IN=129) 80g, 10g, 20g - 3 - 2g
 150 가 , 3 , 80 90 ,
 (33 %) 48.3g (60 70) 90g 가 , 80 90
 2 , 8.4g 가 pH 6.3 6.6 , 76.1g
 .

[]

, (E)

(Hoechst Aktiengesellschaft)

(%0 가 (shaved) .

[A]

가 가

: 0.8 1.0mm 가

가 :

[7]

: 400%, 40

(^RRemolgan PM) 0.4% 20

: 400%, 35 10

200%, 35

([Ⓢ] Granofin PL) 3% 20

([Ⓢ]

: 400%, 35 10

: 200%, 35

2% 20

가 3% 5

1% 40

oH: 6.1

: 400%, 50 10

1 : 200%, 50

(^RDispersogen ASN) 1%

가 ([Ⓢ] Remaderm) 2% 30

가 I : 가 6% 45

1.5%

85% 20

: 400%, 50 10

II : 200%, 50

가 (Remaderm) 1.5% 30

가 II : 가 6% 45

2%,

85% 30

- .

[B]

가 (가) 가

: 1.6 1.0mm 가

가 : 1

: 200%, 35 15

: 150%, 35

1.5% 20

0.5% 40

pH: 5.0

: 300%, 60 10

: 100%, 60

€

- :

(€ Granofin M) 4% 30

5%

(€ Granofin TA) 5% 60

(€ Granofin MH) 2% 20

가 10% 60

3%, 85% 20

: 100%, 60

1%

(€ Derminol - Licker K) 10

€

1%, 85% 15

가 - ,

가 가 .

[C]

가 가 가

: 1.0 1.2mm - ()

가 : 12

: 300%, 35 10

: 200%, 35

€

가 5% 30

1.5% 10

0.5% 60

pH=6.4

: 300%, 50 10

: 200%, 50

/

30

(€ Ofna - pon AS) 4%

€

가 : 가 7% 45

1.5%, 85% 20

가 - , 가

가 .

[D]

가 가

: 0.8mm 가

가 : 18

- : 70%, 30

0.6%, 85% 10

3%

( Tanfix SZS) 60

30%, 40

1% 20

1.2% 30

pH=4.8

: 300%, 40 10

- : 100%, 40

-

(^RGranofin FL) 3%

( Granofin TA) 3% 90

가 : 100%, 50

가 6% 60

0.5%, 85% 20

: 300%, 25 10

, , ,
 , , , , .
 , (%)

: 1000%, 40

(☞ Remolgan PM) 0.2% 120

: 800%, 50

1%, 25% 10

☞

가 : 가 5% 60

2.5%, 85% 20

: 1000%, 30 10

- , , , , ,

.

(57)

1.

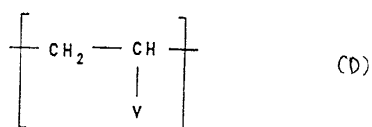
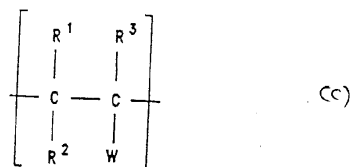
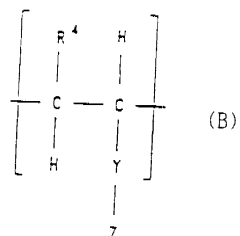
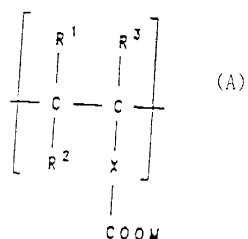
A) (A) 1 99 %.

B) (B) 99 1 %,

C) (C) 0 40 %

D) (D) 0 40 % ,

.



R^1, R^2, R^3 $C_1 - C_4$,

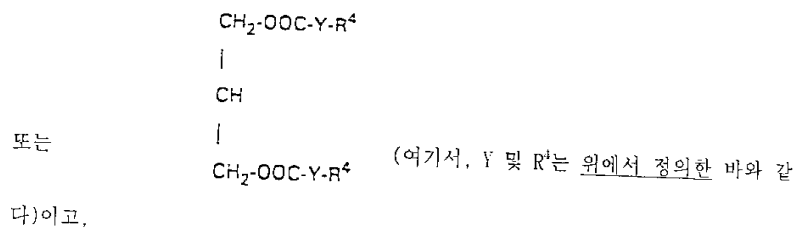
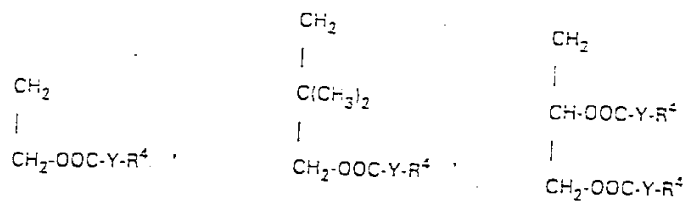
R^4 $C_2 - C_{16}$ $C_2 - C_{16}$,

X $-(CH_2)_{0-10}$ $C_6 - C_{18}$,

M ,

Y $C_1 - C_{13}$, $-CH_2 - (CH=CH - CH_2)_{1-5}$ $-(CH=CH)_{1-3}$,

Z $CN, C(O)N(R^5)_2$ (R^5 , $C_1 - C_{18}$, $C_1 - C_{18}$ $(CH_2)_{1-3} OH$), $COOR^6$ (R^6 $C_1 - C_{36}$),



W CN, C(O)N(R⁵)₂ (, R⁵) COOR⁷ (, R⁷ C₁ - C₁₈)

V C₆ - C₁₈ , C₄ - C₆ , O - R⁷, (O)C - R⁷ (, R⁷ C₁ - C₁₈) .

2.

, 가 , 1

3.

2 , .

4.

2 , , (cascade),

5.

2 , 0.1 20 %() .

6.

2 , 0.1 10 %() .

7.

2 , 0.1 2,000 ppm() .

8.

2 , 50 200 .

9.

2 , , 100 .

10.

2 , 가 .

11.

10 , 20 40 %
.

12.

1 , , 가 (fat - liquor
ing emulsifier).

13.

1 가 가 .

14.

13 , 1 , 가 .

15.

2 10 가 , 13 1 가 , 50 80 %(
)

16.

1 , (A) R^3 ,
.

17.

1 , (A) X가 ,
.

18.

1 , (B) Z가 COOR^6 (, R^6 $C_1 - C_5$ $C_{16} - C_{36}$) ,
.

19.

1 , (C) W가 COOR⁷ (, R⁷ C₁ - C₁₀)

20.

¹
R⁷ C₁ - C₁₀ , (D) V가 , N - O - R⁷ , (O)C - R⁷ (,) ,

21.

5 , 0.2 10 % () .

22.

7 , 0.1 1,000 ppm () .

23.

8 , 100 180 .

24.

9 , , 20 80 .

25.

24 , , 20 40 .

26.

14 , 가 가 가 .

27.

15 , 가 가 가 .

28.

14 , 가 가 .

29.

14 , 가 가 .