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BABAYAN, A.T.

CA

Mechanism of the reaction of formation of 2,5-dimethyl-3-hexyne-2,5-diol. A. T. Babayan. *J. Gen. Chem.* (U. S. S. R.) 8, 602 (in French 607) (1938); cf. *C. A.* 32, 7894[8]. According to Kazarian (*C. A.* 29, 3978[8]), the reaction of condensation of KOH and CaC_2 with Me_2CO in Et_2O proceeds by the intermediate formation of KC:CCaOH, which combines with 1 and 2 mols. Me_2CO. Subsequent hydrolysis with H_2O produces *3-methyl-3-hydroxy-1-butyne* (I) and *2,5-dimethyl-2,5-hydroxy-3-hexyne* (II), resp. B. disputes the above reaction scheme and suggests that II is formed by the interaction of the intermediate compd. of K and Me_2CO with CaC_2 and not with C_2H_2 formed in the hydrolysis: Me_2CO + KOH → $Me_2C(OH)OK$ (III); 2 III + CaC_2 → $(KOCMe_2CC)_2$ + $Ca(OH)_2$. The decompn. of the alcoholate with H_2O gives free II. This reaction scheme is supported by the following evidence. Conducting CO_2 into the reaction mixt. to bind the KOH and to prevent the reaction of C_2H_2 with Me_2CO before the hydrolysis gave equal yields of II. It follows that KOH is the active agent in that phase of the reaction when only CaC_2 and not free C_2H_2 is available. The decompn. of the gelatinous reaction mixt. with CO_2 and subsequent distn. showed no presence of C_2H_2 group, giving KOH and Me_2CO in the proportions corresponding to III. The latter is capable of reacting with CaC_2 in Et_2O, producing the alcoholate, which with H_2O gives II. To prove that I is not directly produced in the condensation of Me_2CO with KOH and CaC_2, the reaction mixt. was filtered, the residue was freed from any by-products by washing with dry Et_2O and then decompd. with acidulated H_2O at 0°, giving II and no other products. The presence of traces of I in the filtrate (before the hydrolysis) indicates that it is contained in the reaction mixt. not in the form of $KOCMe_2C:CCaOH$, as claimed by Kazarian, but as the sol. free I. Its absence in the filter residue shows that it is formed as a result of the secondary reaction of partial alk. decompn. of II.

Chas. Blanc

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BABAYAN, A.T.

CA

1st and 2nd orders

Processes and properties index

The splitting of acetylene γ-glycols by the action of potassium carbonate. A. T. Babayan. *J. Gen. Chem.* (U. S. S. R.) 9, 396-400(1939).—When compds. of the type $R_2C(OH)C{:}CC(OH)R_2$ are heated with K_2CO_3, they either split to give 1 mol. of ketone and the corresponding unsatd. alc. (reaction 1), or 2 mols. of ketone and C_2H_2 (reaction 2), depending on the electronegativity of the R groups. 3,6-Dimethyl-4-octyne-3,6-diol (I) splits 95% by reaction (1) and 5% by reaction (2). 1,2-Dicyclohexylidacetylene splits 85% by (1) and 15% by (2). 2,5-Dimethyl-3-hexyne-2,5-diol (II) splits 80% by (1) and 20% by (2). 2,5-Diphenyl-3-hexyne-2,5-diol splits 30% by (1) and 70% by (2), and 1,1,4,4-tetraphenyl-2-butyne-1,4-diol splits 100% by (2). Only compds. in which R is aliphatic form phenylurethans. The phenylurethan of I m. 201-2°, that of II m. 203°. 3-Methyl-1-butyne-3-ol and PhNCO give $(PhNH)_2CO$. H. M. Leicester

Common elements

Materials index

ASM-SLA Metallurgical literature classification

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BABAYAN, H. T.

CA

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PROCESSES AND PROPERTIES INDEX

Catalytic action of *p*-toluenesulfonic acid on acetylene γ-glycols. I. The action on 2,5-dimethyl-3-hexyne-2,5-diol and 3,6-dimethyl-4-octyne-3,6-diol. A. Babayan. *J. Gen. Chem.* (U. S. S. R.) 9, 1410-11 (1939). Preliminary expts. showed that acetylene γ-glycols react with *p*-$MeC_6H_4SO_3H$ (I) by cleaving 2 mols. H_2O and forming corresponding divinylacetylenes. Thus, the distn. of 4.9 g. 2,5-dimethyl-3-hexyne-2,5-diol with 0.07 g. I at 140-60° gave 91.1% *divinylacetylene*, b. 11, 20°, b. 35°. Under similar conditions 3,6-dimethyl-4-octyne-3,6-diol (3.14 g. and 0.08 g. I) yielded 90% *1,2,5,6-tetramethyl-divinylacetylene*, b. 160-7°. Chas. Blanc

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BABAYAN, A. [T.]

BC

a-3

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

[illegible] glycols. A. BABAJAN, [illegible] (J. Gen. Chem. Russ.; [illegible]). C_2H_2 is passed into Et_2O-COMe [illegible] KOH, at 9—10° (1—2 hr.). [illegible] is added, with cooling, after 24 hr., and the Et_2O layer is separated and distilled; the residue consists chiefly of $(OH\cdot CMe_2\cdot Cl)_2$. COMeEt similarly affords $(OH\cdot CMeEt\cdot Cl)_2$, and cyclohexanone gives di-[illegible]acetylene. R. T.

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MATERIALS INDEX

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BABAYAN, A. T.

CA

The synthesis of unsymmetrical acetylenic γ-glycols

A. Babayan. *J. Gen. Chem.* (U. S. S. R.) 10, 1972 (1940); cf. C. A. 34, 2780. When ketones react with C_2H_2 in the presence of KOH, they give compds. of the structure $R_2C(OH)C{\equiv}CH$. If, instead of isolating this compd., the mixt. is treated with an equimol. amt. of another ketone and the mixt. is cooled and stirred, further reaction takes place to give $R_2C(OH)C{\equiv}CC(OH)R_2$. Me_2CO and C_2H_2 mixts. thus treated with $MeEtCO$ give *2,5-dimethyl-3-heptyne-2,5-diol*, b. 213-16°, d_4^{20} 0.9470, n_D^{20} 1.460, MR 45.31. When the 2nd ketone is $MeEtCO$, *2,5-dimethyl-3-octyne-2,5-diol*, b. 222-7°, d_4^{20} 0.9621, n_D^{20} 1.4568, MR 49.64, is obtained, and when cyclohexanone is used, the product is *unsym-dimethylpentamethylene-*

are at least as effective as AcO_2H in polysulfone formation. H_2O_2, Bz_2O_2 or lauroyl peroxide was ineffective when used in place of H; mineral acids could not be replaced by Ac-

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

GABAYAN, A.T.

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ca

The synthesis of unsymmetrical acetylene γ-glycols. II. A. T. Babayan. *J. Gen. Chem.* (U. S. S. R.) 10, 1177-82(1940); cf. *C. A.* 34, 7851[8].—The method previously used is modified by prepg. and purifying methylbutynol, and treating this with various ketones and KOH in abs. Et_2O. By thus running the process in 2 steps, purer final products are obtained. In this way are prepd. 91% yields of 2,5-dimethyl-3-heptyne-2,5-diol, m. 44-5°, 62% 2,5-dimethyl-3-octyne-2,5-diol, b_{20} 225-8°, 97% dimethylpentamethylenebutynediol($Me_2C(OH)C:CC(OH)(CH_2)_4CH_2$), m. 94-5°, 78% *2-methyl-5-ethyl-3-heptyne-2,5-diol*, m. 39-40°, 66% *1-isopropylol-2-4-methylcyclohexylolacetylene* ($Me_2C(OH)C:CC(OH).CH_2.CH_2.CHMe.CH_2.CH_2$), b_{20} 130-1°, 60% *2,5-dimethyl-3-undecyne-2,5-diol*, b_{20} 170-2°, 15% *2-methyl-5-phenyl-3-hexyne-2,5-diol*, m. 81°, 49% 1,1-dimethyl-4,4-diphenyl-2-butyne-1,4-diol (I), m. 114-15°. The sym. isomer of I, m. 158-62°, is obtained in 20% yield from MePhCO, KOH and C_6H_5 in Et_2O. Similarly, Ph_2CO, KOH and C_6H_5 give 83% tetraphenylbutynediol, m. 192°. These last syntheses show that the reaction cannot go entirely through the formation of enols.

H. M. Leicester

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BABAYAN A. T.

PROCESSES AND PROPERTIES INDEX

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Synthesis and degradation of acetylenic γ-glycols. A. Babayan (Chem. Inst., Erevan). *Bull. Armenian Branch Acad. Sci. U.S.S.R.* 1941, No. 5/6 (10/11), 121-45(in Russian); cf. *C.A.* 34, 7851[9]; 35, 2858[8].—A satisfactory method for the prepn. of acetylenic glycols with 70-80% yields was developed. KOH (60 g.), 150 cc. Et_2O, and 20 g. Me_2CO were treated with stirring at 13-15° with 5 l. dry C_2H_2 over 40 min.; after standing for 2.5 hrs. the mixt. was hydrolyzed, and the org. layer was neutralized with CO_2 and distd. to yield 76.6% *2,5-dimethyl-3-hexyne-2,5-diol*, b_{100} 195-200°, m. 94°; slow distn. of this in the presence of *p*-$MeC_6H_4SO_3H$ gave 80% bis(1-methylvinyl)acetylene, b. 123-4°, n_D^{20} 1.4845, d_4^{20} 0.7863. KOH (28 g.), 100 cc. Et_2O, 10 g. MeEtCO, and 4 l. C_2H_2 gave analogously 64.6% *3,6-dimethyl-4-octyne-3,6-diol*, b. 215-20°, m. 54-5°, and a small amt. of *3-methyl-1-penten-3-ol*, b. 115-40°; the diol dehydrated as above gave 83.6% *3,6-dimethyl-2,6-octadien-4-yne*, b. 167-71°, n_D^{20} 1.490, d_4^{20} 0.80362. Similarly, 20 g. KOH, 100 cc. Et_2O, and 9 g. Et_2CO gave with C_2H_2 65% *3,6-diethyl-4-octyne-3,6-diol*, b. 235-8°, m. 78°, and a small amt. of *3-ethyl-1-pentyn-3-ol*, b. 128-50°; the diol on dehydration as above gave 65.3% of the *corresponding diethyloctadienyne*, b. 107-9°, n_D^{20} 1.4920, d_4^{20} 0.80007. Me hexyl ketone gave 65% *7,10-dimethyl-5-hexadecyne-7,10-diol*, m. 80°; cyclohexanone gave 73.0% *bis(1-hydroxycyclohexyl)acetylene*, m. 110°, which on dehydration as above gave 80% *dicyclohexenylacetylene*, b. 175-80°, n_D^{20} 1.557, d_4^{20} 0.9557. 2-Methylcyclohexanone gave 62% *bis(6-methyl-2-hydroxycyclohexyl)acetylene*, m. 122°, and a small amt. of (6-methyl-2-hydroxycyclohexyl)acetylene, b_{10} 80-90°, m. 55-6°; 3-methylcyclohexanone gave *bis(3-methyl-1-hydroxycyclohexyl)acetylene*, 72%, m. 105-6°, while 4-methylcyclohexanone gave 70% *bis(4-methyl-2-hydroxycyclohexyl)acetylene*, m. 150°; acetophenone gave 50% *2,5-diphenyl-3-hexyne-2,5-diol*, m. 158-62°, while *p*-MeC_6H_4COMe gave 45% *2,5-di-p-tolyl-3-hexyne-2,5-diol*, m. 120° (from MeOH). Ph_2CO gave, in a 4-day reaction with C_2H_2, 82% *tetraphenylbutynediol*, m. 192° (from $CHCl_3$). KOH (30 g.), 100 cc. Et_2O, and 10 g. MeEtCO were treated with ice cooling with 10 g. 2-methyl-3-butyn-2-ol in 50 cc. Et_2O; after standing for 3 days the mixt. was hydrolyzed and worked up as above to yield 91% *2,5-dimethyl-3-heptyne-2,5-diol*, m. 44-5°, b. 210-12°, n_D^{20} 1.452, d_4^{20} 0.9326; dehydration of this as above gave 78% *2,5-dimethyl-1,5-heptadien-3-yne*, b. 141-7°, n_D^{20} 1.4889, d_4^{20} 0.79658; MePrCO in the above reaction gave *2,5-dimethyl-3-octyne-2,5-diol*, b_{100} 225-8°, while Et_2CO gave 67.5% *2-methyl-5-ethyl-3-heptyne-2,5-diol*, b_{100} 220-4°, m. 40°, which gave on dehydration 80% *2-methyl-5-ethyl-1,5-heptadien-3-yne*, b. 158-64°, n_D^{20} 1.4878, d_4^{20} 0.7987; Me hexyl ketone gave 60% *2,5-dimethyl-3-hendecyne-2,5-diol*, b_{10} 170-2°. KOH (13.5 g.), 60 cc. Et_2O, and 6 g. Et_2CO gave, with 6 g. 3-methyl-1-pentyn-3-ol, 65% *3-methyl-6-ethyl-4-octyne-3,6-diol*, b. 230-4°, m. 60° (from light petr.), which on dehydration as above gave 92.9% *3-methyl-6-ethyl-2,6-octadien-4-yne*, b. 176-83°, n_D^{20} 1.4939, d_4^{20} 0.8072. KOH (30 g.), 100 cc. Et_2O, 11 g. cyclohexanone, and 10.8 g. 2-methyl-3-

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BABAYAN, A.T.; TERZYAN, A.C.

Synthesis of β-dialkylaminobutanones. Dokl.AN Arm. SSR 9 no.3: 105-110 '48. (MIRA 9:10)

1. Khimicheskiy Insitut Akademii nauk Armyanksoy SSR, Yerevan. Predstavleno G.Kh. Bunyatyanom.

(Butanone)

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BABAYAN, A. T.

Synthesis of lepidine and its analogs with substituents in the aromatic ring. A. T. Babayan and N. P. Gambaryan. *Sbornik Stat-i Obshchei Khim., Akad. Nauk S.S.S.R.* 1, 666-71(1953); cf. *C.A.* 47, 3266*f*.—Some 70-80% yields of lepidine and its homologs are obtained by cyclization of β-(o-aminoaryl)butanones in the presence of HCl, $ZnCl_2$, and $FeCl_3$. Heating 22.5 g. $FeCl_3$, 8.2 g. 4-phenylamino-2-butanone, 1.1 g. $ZnCl_2$, 5 ml. 35% HCl, and 60 ml. EtOH 6 hrs. on a steam bath, followed by evapn. and addn. of NaOH gave 81.5% *lepidine; picrate*, m. 211-12°. Similarly 4-(o-tolylamino)-2-butanone gave 72% *4,8-dimethylquinoline* (*picrate*, m. 216-18°); 4-(*p*-tolylamino)-2-butanone gave 82% *6-methyllepidine* (*picrate*, m. 236-8°); 4-(*p*-anisidyl)-2-butanone gave 82.8% *6-methoxylepidine* (*picrate*, m. 224-5°). Heating 36.2 g. *N*-(γ-chlorocrotyl)aniline, 20 g. KOH, and 50 ml. iso-AmOH 4 hrs. at reflux gave 67.6% *1-phenylamino-2-butyne*, b_2 112-13°, d_{20} 1.0167, n_D^{20} 1.5739; this (14.5 g.), 6.3 g. $PhNO_2$, 7 ml. H_2SO_4, 1 g. HgO, and 30 ml. MeOH refluxed 8 hrs. gave 46.1% lepidine, probably formed through intermediate formation of 4-phenylamino-2-butanone. Heating 103.4 g. $(MeCCl:CHCH_2)_3NMe_2Cl$ and 114.4 g. 1-$C_{10}H_7NH_2$ 7 hrs. at 130-40° gave 86% dimethylchlorobutenylamine and 90% *N*-(γ-*chlorocrotyl*)-*1-naphthylamine* (I), b_{10} 199-201°, d_{20} 1.1591, n_D^{20} 1.6538. Similar reaction with 2-$C_{10}H_7NH_2$ gave 90% *N*-(γ-*chlorocrotyl*)-*2-naphthylamine* (II), b_{10} 200-2°, d_{20} 1.1485, n_D^{20} 1.6512. I (39.3 g.) treated with cooling with 40 ml. concd. H_2SO_4, evolved HCl; after standing for a considerable time (unstated) the mixt. was neutralized and extd. with Et_2O, yielding 21.7% *7,8-benzolepidine*, isolated as *picrate*, m. 216-17°. Similarly II gave 41.4% *5,6-benzolepidine picrate*, m. 224-5°; free base, m. 100-1°. Free *7,8-isomer*, m. 77-8° (cf. Vavrecka, *C.A.* 44, 3995*b*). G. M. Kosolapoff

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BABAYAN, A.T.

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USSR.

Synthesis of 4,7-dimethylquinoline. A. T. Babayan and Nina P. Gambaryan. Izvest. Akad. Nauk Armyan. S.S.R., Ser. Fiz.-Mat. Nauk 1953, No. 2, 73-8; Referat. Zhur., Khim. 1954, No. 12718.—Hydrolysis of N-(γ-chlorocrotyl)-m-toluidine (I) in the presence of H_2SO_4 yields 4,7-dimethylquinoline (II). It is assumed that the reaction proceeds through an intermediate stage at which 4-(m-tolylamino)-2-butanone (III) is formed, but does not sep., since, in carrying out the reaction under conditions which prevent the formation of III, II cannot be obtained. On cyclization there apparently also forms 4,7-dimethyl-1,2,3,4-tetrahydroquinoline; its presence is proved by the fact that oxidation of the mixt. obtained during cyclization doubles the yield of II. Dehydrochlorination of I forms N-(β-butynyl)-m-toluidine (IV) which upon hydration forms II. A mixt. of 77.0 g. dimethylbis(γ-chlorocrotyl)ammonium chloride (V) and 64.2 g. m-toluidine (VI) is heated for 10 hrs. 130-40°, a soln. of 25 g. of KOH added, and the org. layer distd., giving I, $b_{4.5}$ 123-8.5°, n_D^{20} 1.5563, d_{20} 1.0507; yield based on V 73,

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and bared on VI, 90%. To 69.6 g. of VI and 34.9 g. of 1,3-dichloro-2-butene is added 25 g. of I.OH and the upper layer is distd., yielding 60% I. To 12.1 g. of I is added with cooling 40 ml. H_2O_2, the mixt. is stirred 12 days, neutralized with Na_2CO_3, extd. with ether, and the ether evapd., giving 11 g. substance (VII) from which was sepd. II [picrate, m. 227° (from Me_2CO)], yield 16.9%; styphnate, m. 267° (from nitrobenzene). Crude material (0.98 g.) obtained in hydrolysis of VII was heated on a water bath with 0.15 g. $ZnCl_2$, 1.25 g. $FeCl_3$, 0.5 g. concd. HCl, and 11 ml. alc. The mixt. is alkalized and steam distd., giving II. Treating I in the same way yields only 15% II. To 10.6 g. I, 11 g. KOH, and 15 ml. abs. alc. were heated [illegible] on a water bath, after which it was diluted with H_2O, extd. with ether, and distd. to obtain 67% IV, b. [illegible]. A mixt. of 1.4 g. IV, 0.54 g. [illegible], 0.61 ml. H_2SO_4, 0.2 g. HgO, and 8 ml. MeOH, heated to boiling on a steam bath, the alc. driven off, and the residue extd. with ether, yields 44.8% II picrate.

M. Hosch

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BABAYAN, A. T.

CZECH

Transformations of semicarbazones of β-substituted ketones. I. Semicarbazones of β-arylaminobutanones. A. T. Babayan and N. P. Gambaryan. Sborník Sigma [illegible] 2, 1283 (1953). (J. C. 4, 47, 3266). Heating

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semicarbazone is very low (2-3%). G. M. K.

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BABAYAN, A. T.

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The mechanism of cyclization of β-(arylamino)butanones. A. T. Babayan and N. P. Gambaryan. *Izvest. Akad. Nauk Armyan. S.S.R., Ser. Fiz.-Mat. i Estestven. Nauk* 6, No. 5/6, 99-100(1953)(in Russian; Armenian summary); cf. *C.A.* 47, 3206*f*.—Using 1-anilinobutan-3-one (I) as an example, it was shown that the main part of the β-arylaminobutanones (II) decomps. upon heating with HCl, $FeCl_3$, and $ZnCl_2$ to the aromatic amine and methyl vinyl ketone before cyclization occurs. This shows that the cyclization of I resulting in the formation of lepidine is similar to the Skraup and Doebner-Miller reaction. It was established that the quinoline bases can be prepd. by the reaction of an aromatic amine with compds. which can split out methyl vinyl ketone, e.g., I and its *N*-Me and *N*-Ac derivs. 5,6-Benzolepidine was prepd. in 91.4% yield by the reaction of β-naphthylamine with I. J. Boytar Leach

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BABAYAN, A.T.

USSR

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Realkylation reaction. I. A. T. Babayan, N. P. Gambaryan, and Nina Gambaryan. Doklady Akad. Nauk Armyan. S.S.R. 17, No. 2, 39-44(1953)(in Russian; Armenian summary, 45).—3-Chloro-2-butenylaralkylamines of better purity are prepd. in higher yield when (MeCCl:CHCH$_2$)$_2$NMe$_2$Cl (I) rather than 1,3-dichloro-2-butene (II) is used as an alkylating agent. It is shown that: (1) alkylation of amines with I takes place without intermediary formation of II; (2) tertiary amines are realkylated, when treated with I, exchanging their Me group for the chlorobutenyl radical; (3) realkylation is easily accomplished using (MeCCl:CHCH$_2$)$_2$NMe$_2$OH instead of I; (4) MeCCl:CHCH$_2$NMe$_2$.HCl (III) is more difficult to realkylate than the amine itself; (5) when I is heated at 170-80° for a long time the chlorobutenyl radical splits off and chloroprene resins, III, and HCl salts of Me$_3$N and MeN(CH$_2$CH:CClMe)$_2$ are formed. C$_6$H$_5$N(Me)CH$_2$CH:CClMe, b$_7$ 128-30, is prepd. in 97.4% yield by heating equimolar amts. of I and PhNMe$_2$ for 15 hrs. at 155-60°. (MeCCl:CHCH$_2$)$_2$NMe, b$_5$ 115-16, is prepd. similarly in 95.5% yield from III free base. Cf. Snyder, *et al.*, *C.A.* 44, 9929f.

Elisabeth Barabash

Chem. Inst., Arm. Acad. Sci.

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BABAYAN, A.T.

S/R

Mechanism of cyclization of *N*-butynylarylamines under hydration conditions. A. T. Babayan and N. P. Gambaryan. *Doklady Akad. Nauk Armyan. S.S.R.* 18, 33-8 (in Russian; 3S, Armenian summary) (1954); cf. *C.A.* 49, 1018d.—Cyclization of *N*-butynylarylamines under hydration conditions proceeds through the stage of formation of an intermediate carbonyl compound, as indicated by the following results. Heating 38.3 g. $PhNHCH_2C{:}CMe$ with 35 g. Ac_2O 5 hrs. on a steam bath gave 75% *$PhNAcCH_2C{:}CMe$*, b_5 139-41°, d_4^{20} 1.0632, n_D^{20} 1.542. This (18.7 g.), 1 g. HgO, 7 ml. concd. H_2SO_4 and 30 ml. MeOH heated 8 hrs. on a steam bath yielded 58% AcNHPh and a polymer apparently of methyl vinyl ketone. When the Ac deriv. (6.93 g.) was added slowly to 1.5 ml. concd. H_2SO_4 and kept 6 days there was obtained on treatment of the soln. with semicarbazide 38.5% *$PhNAcCH_2CH_2Ac$ semicarbazone*, m. 177-7.5°. The free ketone (10.25 g.) heated 7 hrs. on a steam bath with 3.2 g. $PhNO_2$, 0.7 g. HgO, 3.5 ml. H_2SO_4 and 20 ml. MeOH gave 0.8 g. unreacted ketone and 53.2% AcNHPh. Heating 47 g. *N*(3-chlorobutenyl)-1-naphthylamine, 21 g. KOH, 00 ml. EtOH and 15 ml. polyethylene oxide glycol 17 hrs. on a steam bath gave 84% *$1\text{-}MeCl\text{-}CCH_2NHC_{10}H_7$*, b_5 173-4°, m. 64.5-5° (from EtOH-ligroine). To 11.6 ml. concd. H_2SO_4 was added with cooling 7.3 g. $PhNHCH_2C{:}CMe$; after 6 days the mixt. yielded 52.5% *$PhNHCH_2CH_2Ac$*, m. 36-8°; *semicarbazone*, m. 166-7°. The ketone (1.63 g.), 0.63 g. $PhNO_2$, 0.7 ml. H_2SO_4, 0.15 g. HgO and 6 ml. MeOH after 7 hrs. on a steam bath gave 24.2% *lepidine*, isolated as *picrate*, m. 211-12°. Heating 1.87 g. $PhNAcCH_2C{:}CMe$, 1.43 g. $2\text{-}C_{10}H_7NH_2$, 0.63 g. $PhNO_2$, 0.1 g. HgO, 1 ml. H_2SO_4 and 25 ml. MeOH 6 hrs. similarly gave 16.2% *5,6-benzolepidine; picrate*, m. 224-5°. Similarly, $1\text{-}MeC{:}CCH_2NHC_{10}H_7$, $PhNO_2$, HgO, H_2SO_4 and MeOH gave in 8 hrs. 30% *7,8-benzolepidine; picrate*, m. 216-17°. The base is best purified by passage over Al_2O_3 followed by elution with Et_2O. The *pure base* m. 76.5-7.5°.

G. M. Kosolapoff

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MKRYAN, G.M.; VARTANYAN, H.G.

Isomerization of 1-dialkyl aminobutenes-2. Dokl. AN Arm. SSR 19 no.3: 83-84 '54. (MLRA 8:7)

1. Predstavleno A.L. Mndzhoyanom. (Butene)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.

E-2

USSR/Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19037.

Author : Babayan A. T., Gambayan N.
Inst : ---
Title : Alkylation in an Aqueous Medium in the Presence of Quartornary Ammonium Salts.

Orig Pub: Zh. Obshch. Khimiyi, 1954, 24, No 10, 1887-1893.

Abstract: The alkylation reactions of acetoacetic ester (I), acetylacetone (II), malonic ester (III) by the action of 1,3-dichlorobutene (IV), $CH_2=CHCH_2Cl$ (V) and $C_6H_5CH_2Cl$ (VI) in an aqueous-alkaline media in the presence of catalysts $(CH_3)_2NCH_2CH=CClCH_3$(VII) are described. By the interaction of I with IV, I with V, and I with VI in the presence of VII (1:1 : 0.1) in an aqueous solution of KOH by heating, is obtained $CH_3COCHRCOOC_2H_5$ (VIII) (enumerated are R, yield in %, b.p. in °C/mm):

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USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19037

action proceeds because of the presence of the haloid alkyl, and that the alkyls of the quarternarnary ammonium salt in the conditions described does not participate in the reaction. Attempts of alkylating fluorene and naphtholene bu heating them with XI in an anhydrous medium did not give the expected results. The interaction of 0.1 mole $C_6H_5C{=}CH$ with 0.1 mole XI by heating (14 hours 160-165°) gave a mixture of substances, from which was isolated 7.4 g. of a compound boiling at 163-166°/14 mm, apparently tri-(3-chlorobutenyl)-phenylacetylene. At the reaction I with XI and III with XI in analogical conditions is obtained IX, yield 57%, and X, yield 22.6%.

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BABAYAN, A. T.

USSR/Organic Chemistry, Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur-Khimiya No 6, 1957, 19126

Author : Babayan A. T., Grigoryan A.A.
Inst : [redacted]
Title : Alkylation in an Aqueous Medium in the Presence of Quarternary Ammonium Salts. II. Nitrogen-alkylation of Aromatic Amines.

Orig Pub: Izv. AN ArmSSR, ser. Fiz-Matem. Yestyestv. and Tekhn. N., 1955, 8, No 4, 81-88

Abstract: N-alkylation of aromatic amines $ArNH_2$ (I), 1,3-dichlorobutene-2 (II), and $C_6H_5CH_2Cl$ with the formation of ArNHR(R= 3-chlorobutenyl (III), R=$C_6H_5CH_2$ (IV))in an aqueous-alkaline medium (NaOH or Na_2CO_3) proceeds with a higher yield (~ 2 times) in the presence of a catalyst - quarternary ammonium salts, than in the absence of the latter at the same duration of the reaction. The yield in the absence of the catalyst

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USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur-Khimiya No 6, 1957, 19126.

remains low even on the prolongation of the reaction time 2-3 times. To 0.2 mole I, Ar-C_6H_5 (Ia), 0.02 mole of dimethyl-di-(3-chlorobutenyl)-ammonium chloride (V) in 10 cc water and 0.2 mole II is added during 20 minutes 15.3 g. KOH in 30 cc water (heated to 45-48°), stirred 5 minutes more, III was obtained (Ar=C_6H_5), yield 54%, b.p. 123-128°/2 mm, $n^{20}D$ 1.5731, d_4^{20} 1.1056. in an analogical manner (at 50-60°, 30-50 min.) are obtained the following III (given Ar, yield in percent, b. p. in °C/mm, $n^{20}D$, d_4^{20}): 2-$CH_3C_6H_4$ 64.5 (61.8 with Na_2CO_3), 133-137/4, 1.5661, 1.0857; 2-$CH_3C_6H_4$, 60, 140-145/2, 1.5716, 1.1395; 3-$CH_3OC_6H_4$, 60, 170-175/5, 1.5645, 1.1410; 4-$CH_3OC_6H_4$, 73.2, 153-156/12, 1.5663, 1.5663, 1.1403; 4-$C_2H_5OC_6H_4$, 69.2, 175-180/5, 1.5566, 1.118; α-Naphthyl (at 85-90°), 80.7, 178-180/2, 1.6387, 1.1533; β-naphthyl (at 75-80°), 73, 185-190/2, 1.6457,

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A. T.

6

Cleavage of quaternary ammonium bases. I. Synthesis of mixed tertiary amines. A. T. Babayan, N. G. Vartanyan, and I. Ya. Zurabov (Zoovet. Inst., Erivan). *Zhur. Obshchei Khim.* 25, 1610-13(1955).—To 25 g. $(CH_2:CMeCH_2)_2(MeCCl:CHCH_2)NHBr$ heated on a steam bath was added 14 g. NaOH in 30 ml. H_2O, resulting in distn. of 7.8 g. liquid and 1.5 l. gaseous product; the latter forms an explosive Ag salt (vinylacetylene and chloroprene mixt.), while the liquid was maluly chloroprene. The acidic soln. treated with NaOH gave $(CH_2:CHCH_2)_2NH$, $b_{5.3}$ 58-60°; *picrate*, m. 112°. Thus, 78 g. $Me_2(PhCH_2)(MeCCl:CHCH_2)NCl$ and aq. NaOH gave vinylacetylene, chloroprene, and 22 g. Me_2NCH_2Ph, $b_{5.3}$ 170-2° (picrate, m. 91.5-5°). $MeEt(MeCCl:CHCH_2)_2NBr$ similarly gave 77.4% $MeEt(MeC:CCH_2)N$, $b_{5.3}$ 133-5°, n_D^{20} 1.4397, d_{20} 0.8165, and 5.8 g. $MeEt(MeCCl:CHCH_2)N$, $b_{5.3}$ 152-5°, n_D^{20} 1.4529, d_{20} 0.9316. $Me(PhCH_2)(MeCCl:CHCH_2)_2NCl$ gave 61% $Me(PhCH_2)NCH_2C:CMe$, $b_{7.5}$ 115-16°, d_{20} 0.951, n_D^{20} 1.521, and a lesser yield of $C_{18}H_{18}N$, b_3 138-60° (crude), b_4 138-40°, d_{20} 0.99074, n_D^{20} 1.5553, which is either $MeN(CH_2C:CMe)(CHPhCH_2C:CMe)$ or $MeN(CH_2C:CMe)[CH(CH_2Ph)C:CMe]$. $MeEt(PhCH_2)(MeC:CCH_2)NBr$ similarly gave $MeEt(PhCH_2)N$, $b_{25.5}$ 100-51, $b_{5.3}$ 187-90°, d_{20} 0.9215, n_D^{20} 1.5068 (*picrate*, m. 113.5-14.5°). G. M. Kosolapoff

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

Quaternary ammonium salts. IV. Decomposition of trialkylbutyrol ammonium salts. A. F. Babayan, G. M.

[illegible]

[illegible] on a water bath, filtered, the water distd., the residue dried [illegible]

Chem. Inst. AS Arm SSR

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

Babayan, A. T.

C-Alkylation by quaternary ammonium salts. A. T. Babayan. Trudy [illegible] Gosp. Gruzin. [illegible] AcCH₂ [illegible] AcCH₂ [illegible] PhCN, PhCH₂ and PhOH can be alkylated using [illegible] ammonium salts

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A. T.

E-2

USSR/Organic Chemistry, Synthetic Organic Chemistry.

Abs Jour: Ref Zhur-Khimiya No 6, 1957, 19075

Author : Babayan A.T., Grigoryan A.A.,
Inst :
Title : Investigation in the Series of Quarternary Ammonium Compounds II. The Formation of Tetrolic Acid at the Interaction of Iodic Trimethyl-(2,2,3,3-tetrachlorbutyl) -ammonium with an Aqueous Alkali.

Orig Pub: Zh. Obshch. Khimiyi, 1956, 26, No 7, 1945-1948.

Abstract: By the chlorination of dimethylaminobutene-2(I) 1-dimethylamino-2,2,3,3-tetrachlorobutane (II) is obtained. At the interaction of iodomethylate II (III) with an alkali, a complete dehydrochlorination of II with the formation of trimethylamine (IV) and tetrolic acid (V) takes place. In a solution 242.5 g. of I in 350 cc of a 34% HCl (acid) is passed 430 g. Cl_2, alkalized with K_2CO_3, extracted with ether, II is

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INDZHIKYAN, M.G.; SURMANYAN, S.A.; BABAYAN, A.T.

Investigations in the field of quaternary ammonium compounds. Report No.8: Stability of bonds of certain organic radicals in quaternary ammonium compounds. Izv. AN Arm. SSR Ser. khim. nauk 10 no.3:213-221 '57. (MIRA 10:12)

1. Khimicheskiy institut AN ArmSSR.
(Ammonium compounds) (Chemical bonds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

INDZHIKYAN, M.G.; BABAYAN, A.T.

Quaternary ammonium compounds. Report No.4: Stevens rearrangement of ammonium compounds. Izv. AN Arm. SSR ser. khim. nauk 10 no.6: 411-419 '57. (MIRA 11:6)

1.Khimicheskiy institut AN ArmSSR.
(Ammonium compounds) (Rearrangements (Chemistry))

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

COUNTRY : USSR
CATEGORY : Pharmacology, Toxicology. Different Preparations

ABS. JOUR. : RZhBiol., No. 121958, No. 56760

AUTHOR : Babayan, A.T.
INST. : -
TITLE : The Pharmacological Action and Toxicity of Dimethyl-butylene-amine, Dimethyl-(3-chlorcrotyl)-amine, and Methyl-di-(3-chlorcrotyl)-amine.
ORIG. PUB. : Farmakol. i Toksikologiya, 1957, Vol.20, No.1, 34-42

ABSTRACT : Studies were made of the toxicity of dimethyl-butylene-amine (I), dimethyl-(3-chlorcrotyl)-amine (II), and methyl-di-(3-chlorcrotyl)-amine (III) in rabbits and mice following administration intravenously, subcutaneously, by inhalation, cutaneously, and perorally. By all routes of administration, the action of the preparations was uniform. At first there was restlessness (abrupt movements, strong respirations, dilatation of the pupils), replaced by suppression with weakened reactions to sound, light, and painful stimuli, weakening of respirations, and of cardiac activity, reduction in blood pres-

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COUNTRY :
CATEGORY :

[illegible] : [illegible], No. [illegible] 1958, No.

AUTHOR :
INST. :
TITLE :

PUB. DATE :

ABSTRACT : sure, diminution of the secretory and motor functions of the stomach. Upon intravenous injection in rabbits, death occurred in not less than two-thirds of the animals during the course of 10-40 minutes at doses for I of 1.2 gm, for II of 0.8 gm, and for III of 0.4 gm. Saturation of the solution of III at 20 degrees led to death of 100% of the animals within 3 days upon daily administration; saturated solution of II caused death in 100% when given daily for seven days; and saturated solution of I caused 80% death rate when given for a period of ten days. With application to the skin, all

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COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1958, No.

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : substances caused inflammation, accompanied by necrosis of the surface layers. Minimum lethal doses, upon application to the skin in the pure form, were 12 gm for I, 8 gm for II, and 4 gm for III. I was active against avian tubercle bacilli and ixodiid ticks. III against enteric bacilli, and II against streptococcus and staphylococcus. -- M.I.Zelyakova

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BABAYAN, A.T.; KROMYAN, T.V.

Third joint session of the chemical institute of the Academies of Sciences of three Transcaucasian republics. Izv.AN Arm.SSR. Khim.nauki 11 no.2:135-137 '58. (MIRA 11:11)
(Chemistry--Congresses)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MOZGOV, I.Ye.; GRIGORYAN, A.A., akademik; KASHKIN, M.G.

Synthesis and pharmacological tests of some amines and ammonium salts containing polyhalide radicals. Dokl. AN Arm. SSR 26 no.2: 81-93 '58. (MIRA 11:5)

1.Chlen-korrespondent AN Armyanskoy SSR (for Mozgov). 2.Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I. Lenina (for Girigoryan). 3.Khimicheskiy institut Akademii nauk Armyanskoy SSR i Moskovskaya veterinarnaya akademiya.
(Amines) (Amonium salts) (Halides)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; GRIGORYAN, A.A.; MARTIROSYAN, G.T.

Splitting of quaternary ammonium salts containing alkyl halides by an alkali hydroxide. Dokl.AN Arm.SSR 26 no.3:153-162 '58. (MIRA 12:10)

1. Chlen-korrespondent AN Armyanskoy SSR (for Grigoryan). (Sodium hydroxide) (Ammonium salts)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; SURMANYAN, S.A.

Comparative stability of bonds between the allyl and benzyl radicals and nitrogen. Dokl AN Arm. SSR 26 no.4:235-240 '58. (MIRA 11:5)

1.Chlen-korrespondent AN Armyanskoy SSR (for Indzhikyan).
2.Institut organicheskoy khimii Akademii nauk Armyanskoy SSR.
(Allyl) (Benzyl) (Nitrogen)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

AUTHORS: Babayan, A. T., Mkryan, G. M., Gyuli - Kevkhyan, R. S.

79-28-5-30/69

TITLE: Investigations in the Field of Amines and Quaternary Ammonium Compounds (Issledovaniya v oblasti aminov i chetvertichnykh ammoniyevykh soyedineniy) X. Synthesis of Isoprene of α, β-and γ, γ'-Dimethylallylchlorides (Polucheniye izoprena iz α, β- i γ, γ'-dimetilallilkhloridov)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 5, pp. 1259-1263 (USSR)

ABSTRACT: The present report deals with the synthesis by alkaline cleavage of the quaternary ammonium salts obtained by conversion of the α, β-and γ, γ'-dimethylallylchlorides with tertiary amines (see scheme 1). For the latter were used: dimethylisoamyl-, dimethyl(γ, γ'-dimethylallyl)-, -dimethylbenzyl- and dimethyl-(butine-2-yl)-amines. The conversion of the compound (III) with amines takes place very energetically. The chlorine (IV) reacts slowly and demands heating. The alkaline cleavage of the obtained

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

Investigations in the Field of Amines and Quaternary Ammonium Compounds
X. Synthesis of Isoprene of α,β-and γ,γ-Dimethylallylchlorides

79-28-5-30/69

quaternary ammonium salts, from the salts with the radical butine-2-gl, lead to the formation of isoprene in a yield of 58 - 85%, and of the corresponding tertiary amine (67 - 89 %). The alkaline cleavage of the quaternary ammonium salts obtained by conversion of the mentioned chlorides with 1 - dimethylaminobutinon - 2, resulted in the formation of vinylacetylene and the corresponding tertiary amine (see scheme 2). These results speak in favor of a easy movability of the radical butine-2-yl and correspond to the earlier obtained data on the cleavage of the quaternary ammonium salts with this radical, dimethyl-γ,γ-dimethylallylamine also forms by alkaline cleavage of the quaternary ammonium salt which is obtained by conversion of the γ,γ dimethylallyl-chloride with dimethylamine dissolved in water. According to the data of references (reference 6) it can be expected that the chloride (V) in the conversion with tertiary amine does not form the compound (V) but the

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

Investigations in the Field of Amines and Quaternary Ammonium Compounds
X. Synthesis of Isoprene of α, β-and γ, γ-Dimethylallylchlorides

79-28-5-30/69

compound isomeric to it (VI) or a mixture of both (see scheme 3). The structure of the synthetized salts has not been explained hitherto. The results of the alkaline cleavage of the synthetized quaternary ammonium salts are mentioned in a table. There are 1 table and 6 references, 4 of which are Soviet.

ASSOCIATION: Institut khimii Akademii nauk Armyanskoy SSR (Institute for Chemistry, AS Armenian SSR)

SUBMITTED: May 3, 1957

Card 3/3

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5(4), 5(3)

SOV/62-59-1-33/38

AUTHORS: Babayan, A. T., Indzhikyan, M. G., Neyman, M. B.

TITLE: On the Equivalence of Nitrogen Bonds in Tetramethyl-Ammonium Bromide (O ravnotsennosti svyazey azota v bromistom tetrametilammonii)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 1, pp 174 - 174 (USSR)

ABSTRACT: According to modern concepts the 4 nitrogen bonds in $(CH_3)_4NBr$ formed by sp^3 bastardization are equivalent. In the present paper the authors checked these data. $(C^{14}H_3)(CH_3)_3NBr$ was synthesized according to the following scheme:

$$2C^{14}H_3OH+H_2SO_4 \rightarrow (C^{14}H_3)_2SO_4+2H_2O;$$

$$(C^{14}H_3)_2SO_4+KBr \rightarrow C^{14}H_3Br+K(C^{14}H_3)SO_4;$$

$$C^{14}H_3Br+(CH_3)_3N \rightarrow (C^{14}H_3)(CH_3)_3NBr.$$

The last process took place at -80°. Furthermore, the product obtained was decomposed in liquid ammonia solution. The

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

On the Equivalence of Nitrogen Bonds in Tetramethyl-Ammonium Bromide SOV/62-59-1-33/36

following reaction took place in the solution: $(CH_3)_4NBr+2K+NH_3 \rightarrow CH_4+(CH_3)_3N+KBr+KNH_2$. The results of the investigation are summarized in the table . It may be seen from it that methane separated during the decomposition of the ternary salt possesses 23% of the activity, whereas trimethyl amine possesses 78%. Thus, the experiments carried out at -80° confirmed the conclusions of the paper (Ref 1) and the generally assumed idea of the equivalence of the bonds of quadrivalent nitrogen. There are 1 table and 2 references, 1 of which is Soviet.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences, USSR)
Institut organicheskoy khimii Akademii nauk ArmSSR (Institute of Organic Chemistry of the Academy of Sciences, Armenian SSR)

SUBMITTED: June 20, 1958

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

5(1,3) SOV/153-2-4-24/32

AUTHOR: Babayan, A. T.

TITLE: Synthesis of Monomers Via Chlorine Derivatives

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 4, pp 594 - 600 (USSR)

ABSTRACT: A report on this paper was given at the All-Union Conference on "Ways of Synthesis of Initial Products for the Production of High Polymers" which took place in Yaroslavl' from September 29 to October 2, 1958. Quaternary ammonium salts containing a 3-chlorobutene-2-yl-radical are easily separated into tertiary amine as well as a mixture of chloroprene and vinyl acetylene under the effect of aqueous alkali. The presence of the latter indicates that the radical mentioned is partly dehydrated before the ammonium complex is separated (see Diagram). In order to extend the above dehydrochlorination reaction, the author dealt with the preparation of various tertiary amines containing chlorine, the iodine methylates of which were separated by means of aqueous alkali. Most amines were prepared from 1,3-dichlorobutene-2 according to diagram 1. Moreover, amines were obtained from 1,2,4-trichlorobutene-2 and chlorobutenes of the allyl type

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as well as from chloroisoamylenes. The reaction mentioned takes place already at room temperature, does not stand temperatures higher than that of a boiling water bath, and rarely takes place at 115-120°. Table 1 shows the separation results (products without nitrogen only). The yield of trimethyl amine was almost equal to the theoretical yield. On account of this example and additional ones, the mutuality of the dehydrochlorination reaction, i.e. of the separation of quaternary ammonium salts containing a halogen in the radical, was proved: this reaction can be successfully used in the synthesis of compounds with conjugated double bonds. The reaction mentioned is of theoretical as well as practical importance because it is simple, easy to carry out, and the products prepared are of high purity. Chlorobutenes and chloroisoamylenes of the allyl type are easily dehydrochlorinated into butadiene (yield 85-90%) and isoprene (yield 60-85%), respectively, by means of aqueous alkali in the presence of catalytical amine quantities (see Diagram). As was to be expected, unsaturated compounds could be obtained in the thermal separation of amines (Table 2). For these reasons, investigations of diene synthesis on the basis of petroleum isopentane were started. These investigations were carried out together with the

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Synthesis of Monomers Via Chlorine Derivatives SOV/153-2-4-24/32

Yerevanskiy zavod imeni Kirova (Yerevan Works imeni Kirov) in its central laboratories. It was more suitable, however, to start from isoamylenes. The author worked out a preparation diagram of isoprene and β-chloroisoprene from trimethyl ethylene (see Diagram). A new copolymer rubber was obtained by means of copolymerization of β-chloroisoprene with chloroprene. It has less tendency towards crystallization as compared with mass-produced nairite but the rest of its properties do not differ from those of the latter. This β-chloroisoprene is superior to other monomers because its polymerization rate is close to that of chloroprene. The ratio of members in the copolymer obtained is equal to that in the initial charge. Difficulties appear in the further dehydration of isoamylenes to isoprene as well as in ridding the latter from impurities. There are 1 scheme, 2 tables, and 2 Soviet references.

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR (Institute of Organic Chemistry of the Academy of Sciences, Armyanskaya SSR)

Card 3/3

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MKRYAN, G.M.; GRIGORYAN, A.A.;

Cleavage of quaternary ammonium salts. Trudy Inst.khim.AN Azerb.SSR 17:131-137 '59. (MIRA 13:4)
(Ammonium salts)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.

Alkylation in an aqueous medium in the presence of quaternary ammonium salts. Dokl. AN Arm. SSR 28 no.2:67-71 '59. (MIRA 12:6)

1.Institut organicheskoy khimii AN ArmSSR. 2.Chlen-korrespondent AN ArmSSR (for Babayan).
(Ammonium salts) (Alkylation)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

SOV/79-29-2-8/71

AUTHORS: Babayan, A. T., Grigoryan, A. A., Martirosyan, G. T.

TITLE: Investigations in the Field of Amines and Ammonium Compounds (Issledovaniya v oblasti aminov i ammoniyevykh soyedineniy). XI. On the Problem of the Influence of Nitrogen and the Molecular Structure Upon the Stability of the Bonds in the Amines and Quaternary Ammonium Compounds, With an Alkyl Halide (XI. K voprosu vliyaniya kharaktera azota i stroyeniya molekuly na prochnost' svyazey v aminakh i chetvertichnykh ammoniyevykh soyedineniyakh, soderzhashchikh galoidalkil)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 386-398 (USSR)

ABSTRACT: As already earlier (Ref 1) reported, the authors investigated the influence of the nitrogen nature and the molecular structure upon the bond stability in the above-mentioned nitrogen compounds containing an alkyl halide. For the purpose of a wider application of the dehydrochlorination cleavage (Ref 2) of the quaternary ammonium salts in the synthesis of compounds with conjugate double bonds, the authors extended their investigation also to tertiary and quaternary ammonium salts, with alkyl polyhalides. The following compounds were synthesized here:

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SOV/79-29-2-8/71

Investigations in the Field of Amines and Ammonium Compounds. XI. On the Problem of the Influence of Nitrogen and the Molecular Structure Upon the Stability of the Bonds in the Amines and Quaternary Ammonium Compounds, With an Alkyl Halide

1-dimethyl-amino-3-chloro butane (V)-3-chloro butene-3(VII),-3,4-dichloro butene-3(VIII),-2,3,3-trichloro butane (X),-3,3,4-trichloro butane (XI),-3,3,4,4-tetrachloro butane (XII),-3,4,4-trichloro butene-3(XIII). In addition, the reaction of these amines was carried out with alcoholic alkali lye as well as the alkaline cleavage of the iodine methylates: (Va), (VIa), (VIIIa), (Xa), (XIa), and (XIIa). Dimethyl-amino butine-2(I) (Scheme 1) served as initial product. Hydrochlorination took place through a flow of dry HCl through molten hydrochloric salt of the amine at 140-160°. The results of hydrochlorination agree with expectations (Table 1, Nr 1-3). The chlorination of the aqueous solutions of the amines designated in the scheme proceeds smoothly and yields products, in which chlorine adds to the double bond. The chlorination results are given in table 1 (Nr 4-7). The hydrochlorination of the monosubstituted dialkyl-amino acetylene agrees with Markovnikov's rule, whereas that of the disubstituted one, under the influence of the ammonium group leads to the

Card 2/3

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SOV/79-29-2-6/7[illegible]

Investigations in the Field of Amines and Ammonium Compounds. XI. On the Problem of the Influence of Nitrogen and the Molecular Structure Upon the Stability of the Bonds in the Amines and Quaternary Ammonium Compounds. With an Alkyl Halide

affiliation of chlorine to the carbon atom, which is the farthest from nitrogen. The results proved the general validity of dehydrochlorination cleavage with aqueous alkali lye of quaternary ammonium salts containing alkyl halide and its applicability in the synthesis of compounds with conjugate double bonds. Proof was also found of the rules governing the cleavage rate of hydrogen chloride in dependence on the character on nitrogen and on the structure of the alkyl halides connected with it. There are 4 tables and 17 references, 10 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Armyanskoy SSR (Institute of Organic Chemistry of the Academy of Sciences, Armyanskaya SSR)

SUBMITTED: December 16, 1957

Card 3/3

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MARTIROSYAN, G.T.

Thermal splitting of ammonium salts containing a β,γ-unsaturated radical. Dokl.AN Arm.SSR 30 no.5:271-277 '60. (MIRA 13:8)

1. Institut organicheskoy khimii Akademii nauk Armyanskoy SSR.
2. Chlen-korrespondent AN Armyanskoy SSR (for Babayan).
(Ammonium salts)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

S/020/60/133/006/027/031XX
B016/B054

AUTHORS: Babayan, A. T., Indzhikyan, M. G., and Bagdasaryan, G. B.

TITLE: Formation of Conjugate Diene Amines During the Interaction of Mono- and Diquaternary Salts of 1,4-Diamines With Aqueous Alkali

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6, pp. 1334-1336

TEXT: The authors report on their investigations of the reactions of mono- and diquaternary salts of 1,4-di-(dimethyl-amino)-2-methyl butene-2. They attempted to find out whether the double 1,4-cleavage of the di-ammonium salt takes place simultaneously or by steps. The authors proved that the protonization of the hydrogen atoms of C_4 is suppressed by the conjugation of the methyl group. Thus, the order of the mentioned cleavage reactions is predetermined according to scheme (I).

Card 1/6

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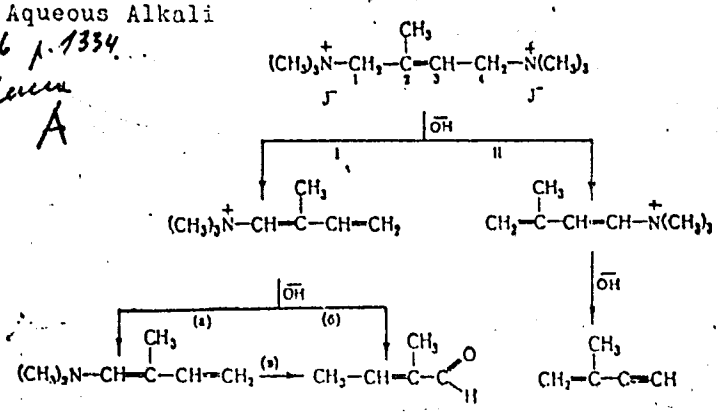
"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

Formation of Conjugate Diene Amines During the Interaction of Mono- and Diquaternary Salts of 1,4-Diamines With Aqueous Alkali

S/020/60/133/006/027/031XX
B016/B054

Д 133, 6 p. 1334
Схема А



This statement by the authors is based on the results of their experiments. From the products of the reaction of the iodine salt of 1,4-di-(trimethyl-ammonium)-2-methyl butene-2 with aqueous alkali, they isolated an aldehyde (corresponding to the dimer of methyl crotonic aldehyde), as well as a high-boiling amine product (apparently a condensation product of methyl crotonic aldehyde with 1-dimethyl-amino-(methyl)-butadiene). The same

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

Formation of Conjugate Diene Amines During the Interaction of Mono- and Diquaternary Salts of 1,4-Diamines With Aqueous Alkali

S/020/60/133/006/027/031XX
B016/B054

result was obtained in the transition from a mixture of quaternary ammonium salt with alkali to an ammonium base. The authors did not succeed (contrary to a statement made by Ya. M. Slobodin, Ref. 5) in detecting even traces of 2-methyl vinyl acetylene in the reaction products. This fact speaks in favor of scheme I. The authors further cleft the monoiodo methyl derivative of 1,4-di-(dimethyl-amino)-2-methyl butene-2 by aqueous alkali at a lower temperature (120°C). Here, the same products were formed as in the cleavage of the diquaternary salt. Subsequently, the authors cleft - in vacuo and at 105-107°C - the hydroxide they had produced by treating the monoiodo methylate of 1,4-di-(dimethyl-amino)-2-methyl butene-2 with an aqueous suspension of the silver oxide. Here, they isolated 1-dimethyl-amino-2-methyl butadiene-1,3 (yield about 40 of the theoretical one). The properties of this substance are described. From the fact that this substance forms dimethyl amine, as well as a corresponding derivative of α-methyl crotonic aldehyde, with the solutions of semicarbazide, 2,4-dinitro-phenyl hydrazine, and hydroxylamine, the authors conclude that the methyl in the diene amine takes a β-position with respect to the amino group:

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$$(CH_3)_2N - CH = \overset{CH_3}{\overset{|}{C}} - CH = CH_2;$$

consequently, the position of the methyl in the monoiodo methylate used is:

$$(CH_3)_2N - CH_2 - \overset{CH_3}{\overset{|}{C}} = CH - CH_2 - \overset{+}{N}(CH_3)_2.$$

On the basis of these results, the authors assume that the second cleavage step of diiodo methylate (step (a) of scheme I) requires a higher temperature (140-145°C) than was hitherto applied. To settle this question, they studied the behavior of two other diquaternary ammonium salts (I) and (II) towards aqueous alkali. It was proved that the alkaline cleavage of (I) already occurred at the temperature of the boiling water bath (see scheme B). The similar cleavage of (II) is illustrated by scheme C. Thus, the authors proved that the diquaternary ammonium salts (I) and (II) are cleft by alkali according to scheme I, i.e., exclusively via step (a) (see scheme A). There are 5 Soviet references.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

Formation of Conjugate Diene Amines During the Interaction of Mono- and Diquaternary Salts of 1,4-Diamines With Aqueous Alkali

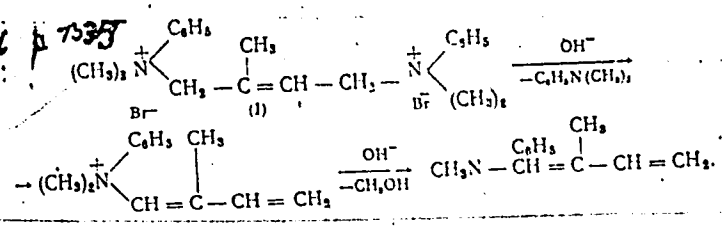
S/020/60/133/006/027/031XX
B016/B054

ASSOCIATION: Institut organicheskoy khimii Akademii nauk ArmSSSR (Institute of Organic Chemistry of the Academy of Sciences Armyanskaya SSR)

PRESENTED: April 12, 1960, by I. L. Knunyants, Academician

SUBMITTED: April 10, 1960

8133,6 p 7335
Schema B



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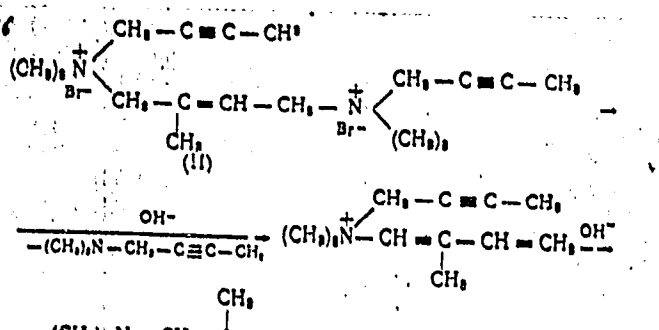
B016/B054

Scheme



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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MARTIROSYAN, G.T.; VARTANYAN, N.G.; INDZHIKYAN, M.G.

Amines and ammonium compounds. Part 12: Synthesis of some amines. Zhur.ob.khim. 30 no.7:2263-2267 Jl '60. (MIRA 13:7)

1. Institut organicheskoy khimii Akademii nauk Armyanskoy SSR. (Amines)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; AZIZYAN, T.A.

Alkylation in an aqueous medium by means of quaternary ammonium salts. Dokl.AN Arm.SSR 31 no. 2:79-86 '60. (MIRA 13:11)

1. Institut organicheskoy khimii Akademii nauk Armyanskoy SSR. 2. Chlen-korrespondent AN Armyanskoy SSR. (for Babayan).
(Alkylation) (Ammonium salts)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; GEGELYAN, Zh.G.; INDZHIKYAN, M.G.

Amines and ammonium compounds. Part 14: Alkaline cleavage of ammonium salts containing an alkoxymethyl group in the δ-position of the β,γ-unsaturated radical. Zhur. ob. khim. 31 no. 2:611-616 F '61. (MIRA 14:2)

1. Institut organicheskoy khimii AN ArmSSR.
(Ammonium compounds)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MARTIROSYAN, G.T.

Amines and ammonium compounds. Part 15: Thermal cleavage of ammonium salts containing 3-chloro or 3-methyl-2-butenyl radicals. Zhur. ob. khim. 31 no.3:819-825 Mr '61. (MIRA 14:3)

1. Institut organicheskoy khimii AN ArmSSR.
(Ammonium salts)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MARTIROSYAN, G.T.

Amines and ammonium compounds. Part 16. Zhur. ob. khim. 31 no.3:825-829 Mr '61. (MIRA 14:3)

1. Institut organicheskoy khimii ArmSSR.
(Ammonium salts)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MARTIROSYAN, G.T.

Splitting of ammonium salts containing unsaturated radicals. Dokl. AN ARM SSR 32 no.2:87-94 '61. (MIRA 14:3)

1. Institut organicheskoy khimii AN Armyanskoy SSR. 2. Chlen-korrespondent An Armyanskoy SSR (for Babayan).
(Ammonium salts)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; BAGDASARYAN, G.B.

New reaction of the rearrangement and splitting of quaternary ammonium salts. Dokl. AN Arm. SSR 34 no.2:75-82 '62. (MIRA 15:4)

1. Institut organicheskoy khimii AN Armyanskoy SSR. 2. Chlen-korrespondent AN Armyanskoy SSR (for Babayan).
(Ammonium salts)

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PHASE I BOOK EXPLOITATION SOV/6195

Nauchnaya konferentsiya institutov khimii Akademiy nauk Azerbaydshanskoy, Armyanskoy i Gruzinskoy SSR. Yerevan, 1957.

Materialy nauchnoy konferentsii institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR (Materials of the Scientific Conference of the Chemical Institutes of the Academies of Sciences of the Azerbaydzhan, Armenian, and Georgian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396 p. 1100 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR. Institut organicheskoy khimii.

Resp. Ed.: L. Ye. Ter-Minasyan; Ed. of Publishing House: A. G. Slkuni; Tech. Ed.: G. S. Sarkisyan.

PURPOSE: This book is intended for chemists and chemical engineers, and may be useful to graduate students engaged in chemical research.

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

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ORGANIC CHEMISTRY

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BABAYAN, A.T.

JUN 25 1963

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PHASE I BOOK EXPLOITATION SOV/6195

Nauchnaya konferentsiya institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR. Yerevan, 1957.

Materialy nauchnoy konferentsii institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR (Materials of the Scientific Conference of the Chemical Institutes of the Academies of Sciences of the Azerbaydzhan, Armenian, and Georgian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396 p. 1100 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR. Institut organicheskoy khimii.

Resp. Ed.: L. Ye. Ter-Minasyan; Ed. of Publishing House: A. G. Sikuni; Tech. Ed.: G. S. Sarkisyan.

PURPOSE: This book is intended for chemists and chemical engineers, and may be useful to graduate students engaged in chemical research.

Card 1/11

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

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ORGANIC CHEMISTRY

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; AZIZYAN, T.A.; ARAKELYAN, E.M.; GEVORKYAN, S.B.; MIRZOYAN, M.K.

Cleavage reactions in quaternary ammonium compounds. Report No.1: Reaction of salts containing a butyn-2-yl group with alkali hydroxide. Izv.AN Arm.SSR.Khim.nauki 15 no.5:429-434 '62. (MIRA 16:2)

1. Institut organicheskoy khimii AN Armyanskoy SSR.
(Ammonium compounds)
(Alkalies)
(Butynyl group)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; GRIGORYAN, A.A.; MINASYAN, R.V.

Rearrangement-cleavage of quaternary ammonium salts containing α-allenallyl and α-acetylenallyl systems. Izv.AN Arm.SSR. Khim.nauki 15 no.6:567-569 '62. (MIRA 16:2)
(Ammonium compounds) (Unsaturated compounds)
(Rearrangements (Chemistry))

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MARTIROSYAN, G.T.; GRIGORYAN, D.V.

Interaction of alkyl halides and dimethyl aniline. Dokl. AN Arm. SSR 35 no.3:129-134 '62. (MIRA 16:6)

1. Institut organicheskoy khimii AN Armyanskoy SSR. 2. Chlen-korrespondent Akademii nauk Armyanskoy SSR (for Babayan).
(Alkyl halides) (Aniline)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; DAVTYAN, N.M.

Alkaline cleavage of 1.2-diquaternary ammonium salts. Dokl. AN Arm. SSR 35 no.4:173-176 '62. (MIRA 17:1)

1. Institut organicheskoy khimii AN Armyanskoy SSR. 2. Chlen-korrespondent AN Armyanskoy SSR (for Babayan).

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BABAYAN, A.T.; MARTIROSYAN, G.T.; KOCHARYAN, S.T.

Amines and ammonium salts. Report No.22: Thermal cleavage of ammonium salts. Izv. AN Arm. SSR. Khim. nauki 16 no.1:37-42 '63 (MIRA 17:8)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MARTIROSYAN, G.T.; GRIGORYAN, D.V.; GRIGORYAN, E.A.

Amines and ammonium compounds. Report No. 23: Thermal and alkaline cleavage of quaternary ammonium salts containing a β-cyanoethyl group. Izv. AN Arm. SSR. Khim. nauki 16 no.5:449-454 '63. (MIRA 17:1)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; GRIGORYAN, A.A.; MINASYAN, R.V.

Amines and ammonium compounds. Part 17: Alkaline cleavage of ammonium salts containing an electron-acceptor substituent in the δ-position in the β,γ-unsaturated group. Zhur.ob.khim. 33 no.6:1766-1773 Je '63. (MIRA 16:7)

1. Institut organicheskoy khimii AN Armyanskoy SSR.
(Ammonium compounds) (Alkalies) (Unsaturated compounds)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; AYVAZOVA, R.A.

Amines and ammonium compounds. Part 18: Stevens rearrangement of quaternary ammonium compounds. Zhur.ob.khim. 33 no.6:1773-1778 Je '63. (MIRA 16:7)

1. Institut organicheskoy khimii AN Armyanskoy SSR.
(Ammonium compounds) (Rearrangement (Chemistry))

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BABAYAN, A.T.; INDZHIKYAN, M.G.; GEGELYAN, Zh.G.

Amines and ammonium compounds. Part 19. Zhur.ob.khim. 33 no.7: 2177-2181 Jl '63. (MIRA 16:8)
(Amines) (Ammonium compounds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; GEGELYAN, Zh.G.

Amines and ammonium compounds. Part 10: Alkali cleavage of ammonium salts containing an electron-acceptor group in the δ-position of the β,γ-unsaturated group. Zhur.ob.khim. 33 no.7:2181-2184 Jl '63. (MIRA 16:8)

(Ammonium compounds) (Alkalies)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; BAGDASARYAN, G.B.

Amines and ammonium compounds. Part 21: Rearrangement-cleavage of ammonium salts containing α,β-and $\beta\gamma$-unsaturated groups. Zhur.ob.khim. 34 no. 2:411-415 F '64. (MIRA 17:3)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; BAGDASARYAN, G.B.; DAVTYAN, N.M.

Amines and ammonium compounds. Part 22: Rearrangement-cleavage of ammonium salts containing -chloroethyl and allyl-type groups taking place under the effect of aqueous alkali. Zhur.ob.khim. 34 no.2:416-421 F '64. (MIRA 17:3)

1. Institut organicheskoy khimii AN ArmSSR.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; TUMANYAN, L.R.

Rearrangement-cleavage of quaternary ammonium salts containing two allyl-type groups. Dokl. AN Arm. SSR 36 no.2:95-99 '64.(MIRA 17:3)

1. Institut organicheskoy khimii AN Armyanskoy SSR. 2. Chlen-korrespondent AN Armyanskoy SSR (for Babayan).

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; TAKMAZYAN, K.TS.; ANANYAN, E.S.

Aqueous alkali cleavage of 1,5-diammonium salts containing a multiple bond in the 2,3-position of the common group. Dokl. AN Arm. SSR 38 no.3:157-162 '64. (MIRA 17:6)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; MARTIROSYAN, G.T.; MITCHIEYAN, M.G.; DAVTYAN, N.M.
MINASYAN, E.B.

Chemism of the mineralization process of organically combined chlorine in the alkaline cleavage of quaternary ammonium salts. Dokl. AN Arm. SSR 39 no. 2:99-106 '64. (MIRA 17:9)

1. Chlen-korrespondent AN ArmSSR (for Babayan).

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, A.T.; INDZHIKYAN, M.G.; GEGELYAN, Zh.G.

Amines and ammonium compounds. Part 25: Alkaline decomposition of quaternary ammonium salts containing a tertiary butyl substituent in the δ-position of the β,γ-unsaturated group. Izv. AN Arm.SSR. Khim. nauki 18 no.1:25-31 '65. (MIRA 18:5)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

[illegible], A.T.; [illegible], M.G.; [illegible], G.B.

Amines and ammonium compounds. Part [illegible]: [illegible] composition piperazinium salts containing the allyl-type group. Izv. AN Arm.SSR. Khim.nauki 18 no.4:347-350 '65.

(MIRA 18.12)

1. Institut organicheskoy khimii AN Armyanskoy SSR. Submitted March [illegible], 1964.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

[illegible], A.T., [illegible], M.G.; [illegible], [illegible].

Amino [illegible] ammonium compounds. Part [illegible] [illegible] of [illegible] ammonium [illegible] containing [illegible] [illegible]. Inv. AN Arm. SSR. Khim. nauki 18 no. [illegible] [illegible].

(MIRA 18:[illegible])

1. Institut organicheskoy [illegible] AN Armyanskoy SSR. [illegible] July [illegible], 1964.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

MABAYAN, R. A.

"Arithmetical Operations on Digital Computers (Parallel Type)." p. 214 in book Studies of Mechanics and Applied Mathematics, Moscow, Oborongiz, 1958, 218pp. (ed. Sokolovskiy, V. V.)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, B.A.

Methods for carrying out arithmetical operations on parallel machines. Trudy MFTI no.1:214-219 '58. (MIRA 12:1)
(Electronic digital computers)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, D.N., otv.red.; STANOVOVA, L., red.; OVASAPYAN, A., tekhn.red.

[Transactions of the first Transcaucasian conference on the status of and outlook for the study of fungi, March 11-13, 1958] Materialy pervogo Zakavkazskogo soveshchaniia, posviashchennogo sostoianiiu i perspektivam izucheniia mikologicheskoi flory, 11-13 marta 1958 g. Erevan, Izd-vo Erevanskogo univ., 1958. 107 p. (MIRA 12:4)

1. Zakavkazskoye soveshchaniye, posvyashchennoye itogam i perspektivam izucheniya mikologicheskoy flory respublik Zakavkaz'ya. 1st, Yerevan, 1958.
(Transcaucasia--Mycological research)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, D.N. (Yerevan)

"Mycoflora of Azerbaijan," vol.2, vol.3, pt.1. Reviewed by D.N. Babaian. Zashch. rast. ot vred. i bol. 5 no.9:62 S '60. (MIRA 15:6)

1. Chlen-korrespondent AN Armyanskoy SSR.
(Azerbaijan--Rusts (Fungi))

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, D.N.

"Materials on the fungi of Turkmensistan" by E.N.Koshkelova. Reviewed by D.N.Babaian. Izv. AN Turk. SSR. Ser. biol. nauk no.1:78-79 '61. (MIRA 14:8)

1. Yerevanskiy gosudarstvennyy universitet.
(TURKMENISTAN--FUNGI) (KOSHKELOVA, E.N.)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, Ye. A.

"Multiple and Miliary Melanoblastoma Metastasis into the Brain," Zhur. norv. i psikh., 52, No.7, 1952

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, Ye. A.

"Malignant Cerebral Hypertension," Zhur. nerv. i psikh, 52m No.9, 1952

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, YE.A.

Further development of psychiatric and neurologic aid to the population. Zhur. nevr. i psikh. 55 no.1:3 Ja '55. (MLRA 8:2)

1. Otdel psikhonevrologicheskoy pomoshchi Ministerstva zdravookhraneniya SSSR.
(PSYCHIATRY,
in Russia, devaoop. of psychiat. aid)
(NEUROLOGY,
in Russia, develop. of psychiat. aid)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

DUKEL'SKAYA, Inna Naumovna; KOROBKOVA, Emma Aleksandrovna; BABAYAN, E.A.; red.; KNAKNIN, M.T., tekhn.red.

[Disability evaluation and employment of schizophrenics] Vrachebno-trudovaia ekspertiza i trudoustroistvo bol'nykh shizofreniei. Moskva, Gos. izd-vo med. lit-ry, 1958. 70 p. (MIRA 12:1)
(SCHIZOPHRENIA) (DISABILITY EVALUATION)
(MENTALLY HANDICAPPED--EMPLOYMENT)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, E.A.; SEREBRYAKOVA, Z.N. (Moskva)

Imminent problems in the extension and improvement of public neuro-psychiatric aid. Zhur. nevr. i psikh 58 no.12:1409-1411 '58 (MIRA 12:1)
(PSYCHIATRY,
psychiatric aid (Rus))

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, E.A., otv.red. (Moskva); FEDOTOV, D.D., red.; ZENEVICH, G.V., red. (Leningrad); LEBEDINSKIY, M.S., red. (Moskva); MYASISHCHEV, V.N., red. (Leningrad); RAPOPORT, A.M., red. (Moskva); SUKHAREBSKIY, L.M., red. (Moskva)

[Problems in occupational therapy] Voprosy trudovoi terapii. Moskva, M-vo zdravookhraneniia SSSR, 1958. 299 p. (MIRA 14:4)

(OCCUPATIONAL THERAPY)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

PORTNOV, A.A., obshchiy red.; BABAYAN, E.A., red.; BORINEVICH, V.V., red.; GUREVICH, Ye.I., red.; PYATNITSKAYA, I.N., red.; ROZHNOV, V.Ye., red.; STREL'CHUK, I.V., red.; FEDOTOV, D.D., red.; KHMELEV, N.S., red.

[Alcoholism; a collection of articles on its clinical aspects, pathogenesis, treatment, and prevention] Alkogolizm; sbornik rabot po klinike, patogenezu, lecheniiu i profilaktike. Pod obshchei red. A.A.Portnova. Moskva, 1959. 447 p. (MIRA 13:3)

1. Russia (1923- U.S.S.R.) Ministerstvo zdravookhraneniya. (ALCOHOLISM)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, E.A.; MOROZOV, G.V.; POPOV, Ye.A.; FELINSKAYA, N.I. (Moskva)

Some problems in legal psychiatry as shown by material from a congress in Copenhagen in April-May 1958. Sud.-med.ekspert. 2 no.1:38-42 Ja-Mr '59. (MIRA 13:4)

(FORENSIC PSYCHIATRY)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5

BABAYAN, E.A.

System for the organization of psychiatric care in the U.S.S.R. and the role of the medical nurse in it. Med. sestra 19 no.7:3-7 Jl '60. (MIRA 13:8)

1. Iz Ministerstva zdravookhraneniya SSSR, Moskva.
(PSYCHIATRIC NURSING)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102810013-5"