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S/056/61/041/005/020/038

B102/B108

The dispersion relation...

determined. It is shown that for $\omega_H < \omega < \omega^* < \sqrt{\omega_H^2 + \omega_0^2}$, the dispersion relation has a real root $k(\omega)$, to which corresponds a plasma wave that propagates without absorption. Eq. (1) is rewritten by introducing dimensionless parameters. This dispersion equation is solved numerically. The positive roots are determined for the non-resonance region and their behavior is studied in the vicinity of resonances. The frequency dependence of N is investigated for various electron temperatures and plasma densities ($\beta = 1, 2, 2.25$ and 17.6). The results showed that the roots of Eq. (1) corresponding to plasma waves may be also determined from Eq. (5) in good approximation. Only near the hybrid frequency $\sqrt{\omega_H^2 + \omega_0^2}$ the results are not valid. Besides the real roots, Eq. (1) has an innumerable set of complex roots. The dispersion relation may also be considered as an equation for determining ω as a function of the wave number k . It is proved that then there exists an innumerable set of real roots $\omega = \omega(k)$ whereas (1) has no complex roots $\omega = \omega(k)$. The authors thank A. A. Chechina for help. There are 3 figures, 2 tables, and 11 references: 8 Soviet and 3 non-Soviet. The three references to the English-language publications read as follows: E. P. Gross, Phys. Rev. 82, 232, Card 3/4

The dispersion relation...

²⁶⁷⁰⁵
S/056/61/041/005/020/038
B102/B108

1951; J. Bernstein. Phys. Rev., 109, 10, 1958; J. E. Drummond. Phys. Rev.
110, 293, 1958.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State
University)

SUBMITTED: May 17, 1961

Card 4/4

DNESTROVSKIY, Yu.N. (Moskva); KOSTOMAROV, D.P. (Moskva)

Propagation of electromagnetic waves in a plasma transversely to
an external magnetic field. Zhur. vych. mat. i mat. fiz. 2 no.1:
97-106 Ja-F '62. (MIRA 15:3)
(Electromagnetic waves) (Plasma (Ionized gases))
(Magnetic fields)

39668
S/056/62/043/001/024/056
B104/B102

26.2340

AUTHORS: Dnestrovskiy, Yu. N., Kostomarov, D. P.

TITLE: Stability of plane electron beams in bounded systems with a decelerating electric field

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 1(7), 1962, 158 - 165

TEXT: The stability of steady-state solutions of the kinetic equations for a bounded system of charged particles is studied without making any assumption on the potential of an external field. The system consists of particles of one kind (electrons); the results may be well applied to a plasma. The stability problem proves to be equivalent to the problem of the existence of eigenvalues of a Fredholm integral equation with a kernel depending on a complex parameter. If this equation has no eigenvalues in the right-hand half-plane, the steady-state solutions will be stable; otherwise, they are unstable. The stability of steady-state solutions is derived with the aid of a criterion for the injection of an

electron beam into the system: the function $E(p, x) = \int_0^1 K(p, x, \xi) E(p, \xi) d\xi$
Card 1/2

Stability of plane electron...

S/056/62/043/001/024/056
B104/B102

must not have eigenvalues in the right-hand half-plane. The kernel $K(p, x, \xi)$ is analytic with respect to p ; $E(p, x)$ is the electric-field function. The steady-state solutions are stable if (1) the particles are not reflected by the decelerating field, and (2) the distribution function of the electrons of the injected beam is a monotonically decreasing function of the velocity. X

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: January 17, 1962

Card 2/2

DNESTROVSKIY, Yu.N. (Moskva); KOSTOMAROV, D.P. (Moskva)

Stability of an inhomogeneous magnetized plasma. Zhur. vych.
mat. i mat. fiz. 3 no.5:905-914 S-O '63. (MIRA 16:11)

S/109/63/008/003/006/027
D413/D308

AUTHORS: Dnestrovskiy, Yu. N., and Kostomarov, D. P.
TITLE: The diffraction of a plane electromagnetic wave
on a circular plasma cylinder
PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 3, 1963,
408-415

TEXT: The authors consider the diffraction of a plane electromagnetic wave on a circular plasma cylinder in the presence of a uniform external magnetic field parallel to the axis of the cylinder. A plasma with a blurred boundary is assumed, such that electrons are absent at points outside the cylinder, while, in its interior, the undisturbed electron distribution function is close to the Maxwellian. The case of normal incidents of a wave with an electric vector polarized along the cylinder axis is investigated. It is assumed that the mean Larmor radius of the electrons is much smaller than the radius of the cylinder and the wavelength and all the calculations are taken to an accuracy including the
Card 1/2

The diffraction of a...

S/109/63/008/003/006/027
D413/D308

second order of small quantities. By making use of the known solution of the diffraction problem for a dielectric cylinder, the problem is reduced to an integral equation which is then solved by the method of successive approximations. It is observed that the method may be extended to solve the diffraction of waves with this polarization at a plasma cylinder of any form, provided a solution is available for the corresponding dielectric cylinder.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Faculty of Physics of the Moscow State University im. M. V. Lomonosov)

SUBMITTED: March 9, 1962

Card 2/2

DNESTROVSKIY, Yu.N.; KOSTOMAROV, D.P.

Propagation of electromagnetic waves in a half-space filled
with a plasma. Vest. Mosk. un. Ser. 3: Fiz., astron. 18 no.2:
3-8 Mr-Apr '63. (MIRA 16:6)

1. Kafedra matematiki Moskovskogo universiteta.
(Electromagnetic waves)
(Plasma (Ionized gases))

L 9913-63 EWT(1)/BDS/EEC(b)-2/ES(w)-2--AFFTC/ASD/ESD-3/AFWL/
SSD--Pi-4/Pab-4/Po-4--IJP(C)

ACCESSION NR: AP3000019

S/0057/63/033/005/0625/0626

AUTHOR: Dnestrovskiy, Yu. N.; Kostomarov, D. P.

TITLE: Concerning the stability of weakly inhomogeneous plasma 21 74 73

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 33, no. 5, 1963, 625-626

TOPIC TAGS: stability of plasmas, inhomogeneous plasmas

ABSTRACT: The stability of a cold inhomogeneous plasma in a one-component magnetic and a one-component gravity field is investigated. The stability is investigated with respect to perturbations in the form of purely longitudinal plasma waves (rot $E = 0$) of frequency Ω . The point of departure is the dispersion equation involving the components of the dielectric constant tensor. Neglect of smaller terms leads to an expression cubic in Ω . Instability of the plasma with respect to a perturbation with a given wave vector is equivalent to the said equation having complex roots. If all the roots are real, the plasma will be stable. For small values of the parameter $Beta$ characterizing the direction of propagation of the perturbing wave relative to the y-axis, long

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ACCESSION NR: AP3000019

waves are conducive to instability. For Beta equal zero there is obtained the instability condition for a wave propagating along the y-axis, found by Lehnert, B. (Phys. fluids, 4, 847, 1961). With increase of Beta the region of instability shifts to the side of shorter wavelengths. Orig. art. has: 7 equations.

ASSOCIATION: Fizicheskiy fakul'tet MGU (Physics Department, MGU)

SUBMITTED: 06Oct62

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: PH

NR REF SOV: 000

OTHER: 001

1m/ ja
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L 18477-63

EWG(k)/EWT(1)/BDS/ES(w)-2 AFTTC/AFWL/ASD/ESD-3/IJP(C)/SSD

ACCESSION NR: AP3005501

Pz-4/Pi-4/Pab-4/Po-4

S/0057/63/033/008/0922/0928

AT

AUTHOR: Dnestrovskiy, Yu.N.; Kostomarov, D.P.; Skry*dlov, N.V.

80

TITLE: Waves in a plasma near the cyclotron resonances

79

SOURCE: Zhurnal tekhnicheskoy fiziki, v.33, no.8, 1963, 922-928

TOPIC TAGS: plasma, dispersion, cyclotron resonance

ABSTRACT: The propagation of waves transversely to an external magnetic field in a plasma whose temperature is low compared with the electron rest energy is discussed on the basis of a relativistic dielectric tensor. The relativistic treatment is important at frequencies near harmonics of the cyclotron frequency, even at non-relativistic temperatures, for the non-relativistic dielectric tensor has singularities at these frequencies. The relativistic dielectric tensor employed is taken from work of B.A.Trubnikov (Sb."Fizika plasmy* i problemy* termoyaderny*kh reaktsiy" 3, 104, 1958). The resonance portion of the tensor is expanded in powers of the ratio of the Larmor radius to the wavelength, and only the leading term is retained. Although this ratio becomes large in the non-relativistic case near the cyclotron resonances, it remains small in the relativistic case (at non-relativis-

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L 18477-63

ACCESSION NR: AP3005501

tic temperatures) for electromagnetic waves and for one type of plasma wave. The retained portion of the dielectric tensor is put into a form suitable for computation and its behavior in the neighborhood of the cyclotron frequency and its first two harmonics is illustrated with graphs. The resonance term has an anti-Hermitian part (leading to absorption) only for frequencies below the resonance. Expressions are obtained for the refractive indices for the ordinary and the extraordinary electromagnetic waves and for the plasma wave having the smaller index. At the cyclotron frequency the extraordinary wave is much less strongly absorbed than the ordinary wave. The plasma wave having the larger refractive index violates the condition that the wavelength be large compared with the Larmor radius. A method of successive corrections is proposed for dealing with this case. An error is pointed out in a paper by A.A.Rukhadze and V.P.Silin (ZhTF, 32, 423, 1962). Orig.art. has: 36 formulas and 2 figures.

ASSOCIATION: Fizicheskii fakul'tet MGU (Physics Department, MGU)

SUBMITTED: 02Jul62

DATE ACQ: 06Sep63

ENCL: 00

SUB CODE: PH

NO REF SOV: 007

OTHER: 000

Card2/2

DNESTROVSKIY, Yu.N.; KOSTOMAROV, D.P.

Eigenvalue problems for second-order equations in the case of
nonlinear dependence on the parameter λ . Dokl. AN SSSR 152
no.1:28-30 S '63. (MIRA 16:9)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.
Predstavleno akademikom I.G.Petrovskim.
(Boundary value problems) (Differential equations)

ACCESSION NR: AP4024560

S/0208/64/004/002/0267/0277

AUTHOR: Dnestrovskiy, Yu. N. (Moscow); Kostomarov, D.P. (Moscow)

TITLE: Asymptotics of eigenvalues for not self-adjoint boundary problems

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 4, no. 2, 1964, 267-277.

TOPIC TAGS: eigenvalue, not self adjoint boundary problem, boundary problem, second order differential equation

ABSTRACT: The boundary problem

$$\frac{d^2 w}{dx^2} + k^2 Q(x, \lambda) w = 0,$$

$$w(+\infty, \lambda, k) = w(-\infty, \lambda, k) = 0,$$

is considered, where the parameter λ enters nonlinearly. An asymptotic method is described for the approximate determination of the eigenvalues for large values of k (real). In the classical Sturm-Liouville problem, the equation for

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ACCESSION NR: AP4024560

the approximate determination of the eigenvalues for large k is:

$$\cos \left(k \int_{x_1(\lambda)}^{x_2(\lambda)} \sqrt{Q(t, \lambda)} dt \right) \cos \left(k \int_{x_2(\lambda)}^{x_3(\lambda)} \sqrt{Q(t, \lambda)} dt \right) \dots = 0.$$

It is shown that the approximating equation for the above problem has the same form. By imposing conditions on Q , the problem is carried to the complex plane. The investigation is based on the asymptotic behavior of the equation

$$d^2 w / dz^2 + k^2 Q(z, \lambda) w = 0$$

for $k \rightarrow \infty$. Asymptotic formulas are obtained by considering a Volterra integral equation whose solutions satisfy the differential equation. The analysis depends on the topological structure of the level curves of the function $\operatorname{Im} q(z, \zeta, \lambda)$ where

$$q(z, \zeta, \lambda) = \int_{\zeta}^z \sqrt{Q(t, \lambda)} dt.$$

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ACCESSION NR: AP4024560

This structure is determined by the distribution of zeros of the function $Q(z, \lambda)$.
The results obtained are valid only for a particular distribution. Orig. art. has:
4 figures and 28 equations.

ASSOCIATION: none

SUBMITTED: 18Apr63

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: EMA

NO REF SOV: 004

OTHER: 002.

Card 3/3

L 23816-65 EWT(1)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2
Pz-6/Po-4/Pab-10/Pi-4 IJP(c) AT

ACCESSION NR: AP5000837

S/0057/64/034/012/2140/2145

AUTHOR: Dnestrovskiy, Yu.N.

TITLE: Cyclotron instability of plasma waves²¹ in nonuniform plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.10, 1964, 2140-2145

TOPIC TAGS: plasma instability, plasma wave, magnetic field plasma effect

ABSTRACT: It has been shown by A.N.Krall & M.N.Rosenbluth (Phys.Fluids 5,1435,1962 and Phys.Fluids 6,254,1963) and A.B.Mikhaylovskiy & A.V.Timofeyev (Zhur.eksp.i teor fiz.44,919,1963) that in theoretical analysis of plasmas in magnetic fields the stability of short plasma waves is strongly affected if one takes inhomogeneities of the magnetic field, due to plasma currents, into account. Particle drift, associated with field nonuniformity, leads to new types of instability and to modification of the regions of instabilities of known kinds. In the present work there is investigated theoretically the instability of purely longitudinal waves propagating transversely to the external magnetic field in weakly inhomogeneous plasma. The considered waves are stable in a uniform field, but may, under certain conditions, become unstable in a nonuniform field. The treatment is limited to the simple case

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ACCESSION NR: AP5000837

of plane geometry of the system and one-dimensional inhomogeneity, with specific attention to oscillations of the order of the ionic cyclotron frequency. Equations are written for the electric field potential, and the properties of the adduced $V_m^{\pm}(z, p)$ functions are discussed. The problem is analyzed by the "method of a dispersion equation at the given point" (loc.cit.supra). It is shown that at sufficiently high plasma pressures and in the presence of steep density gradients very short waves (with a wavelength less than the Larmor radius and a frequency of the order of the Larmor frequency of the ions) become unstable. Finally, there are derived equations for the unstable wave increments under conditions of pronounced instability. It is asserted that some of the inferences of Krall & Rosenbluth are erroneous. "The author expresses his deep gratitude to D.P.Kostomarov and A.B.Mikhaylovskiy for useful discussions." Orig.art.has: 28 formulas.

ASSOCIATION: Fizicheskiy fakultet MGU (Physics Department, MGU)

SUBMITTED: 14Dec63

ENCL: 00

SUB CODE: ME

NR REF SOV: 003

OTHER: 002

2/2

21719-66 EWT(1)/ETC(f)/EPF(n)-2/ENG(m) IJP(c) GS/AT
ACC NR: AP6004876 SOURCE CODE: UR/0057/66/036/001/0039/0044

AUTHOR: Dnestrovskiy, Yu.N.; Kostomarov, D.P.

ORG: Physics Department, MGU (Fizicheskiy fakul'tet MGU)

TITLE: Probing of a plasma with electromagnetic waves

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 1, 1966, 39-44

TOPIC TAGS: plasma diagnostics, plasma density, electromagnetic wave reflection, phase shift, external magnetic field, Volterra equation

ABSTRACT: This paper is concerned with determining the density of a plasma in an external magnetic field as a function of distance from the surface by measuring the phase shifts on reflection of normally incident electromagnetic waves of different frequencies. The problem of calculating the density as a function of depth from the measured phase shift as a function of frequency is treated in the geometric optics approximation for the two cases in which the magnetic field is perpendicular or parallel, respectively, to the plasma - vacuum boundary. When the magnetic field is perpendicular to the plasma boundary the problem reduces to the solution of a Volterra integral equation of the first kind of the Abel type, and the solution can be expressed as a quadrature. When the ordinary wave is employed for probing, phase shifts are required at low frequencies where, unless the plasma density is high and the magnetic field is weak, the geometric optics approximation is no longer valid. When the extra-

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ACC NR: AP6004876

2
ordinary wave is employed, phase shifts are not required at frequencies below the Larmor frequency. When the magnetic field is parallel to the plasma boundary the problem again reduces to the solution of a Volterra integral equation of the first kind which, however, is of the Abel type only for the case when the ordinary ray is employed for probing. It is proposed that the integral equation relating plasma density and phase shift of the extraordinary ray be solved numerically by the regularization technique of A.N.Tikhonov (DAN SSSR, 151, No.3, 501, 1963). Artificial problems were solved in this way to test the accuracy and stability of the technique, and some of the results are presented graphically. It is shown that 20% errors in measuring the phase shifts result in approximately 10% errors in the calculated plasma densities. Use of the extraordinary wave has the same advantages in the case of a parallel magnetic field as in the case of a perpendicular field. The authors thank A.N.Kharkov and V.I. Pistunovich for discussions. Orig. art. has: 17 formulas and 3 figures.

SUB CODE: 20/

SUBM DATE: 11Jan65/

ORIG REF: 006/

OTH REF: 000

Card 2/2 *dela*

ACC NR:

AT6034337

AUTHORS:

Dnestrovskiy, Yu. N. (Moscow); Kostomarov, D. P. (Moscow)

SOURCE CODE: UR/0000/66/000/000/0060/0067

ORG: none

TITLE: Application of Galerkin method to the solution of nonhomogeneous plasma stability problems

SOURCE: Chislennyye metody resheniya zadach matematicheskoy fiziki (Numerical methods of solving problems in mathematical physics); sbornik statey. Moscow, Izd-vo Nauka, 1966, 60-67

TOPIC TAGS: nonhomogeneous plasma, magnetic trap, plasma wave, numeric solution, complex function

ABSTRACT: The problem of nonhomogeneous plasma stability, relative to drift oscillations of ordinary waves, is analyzed. The plasma is assumed to be nonhomogeneous along the x-axis and is in a plane-parallel magnetic field $H = (0, 0, H(x))$. The electron-cyclotron frequency is assumed to be much smaller than the characteristic plasma dimension along x, and the thermodynamic pressure is much less than the magnetic pressure. The ordinary wave drift oscillation equation is given by

$$L[E] = E'' - k^2 E + \frac{\omega^2}{c^2} \epsilon E = 0,$$

with finite conditions at infinity, or

Card 1/2

USSR/Ships - Construction Plastics - Properties Mar/Apr 1947	"Plastics from Vinyl Chloride Resins," S. G. Dnevniin, Eng., 1 p "Sudostroyeniye" No 2	The first use of plastics from a vinyl chloride base came near the end of World War II. This substance has several important characteristics: It is resistant to acids, bases and any other liquid, it has insulating properties, resistance to high temperatures, non- permeability for water, and a relatively high fire- resistive quality. It can be used as a cover for metal surfaces to give them a good anticorrosive coat- ing. At the present time one of the Leningrad Ship- building Works is making use of this plastic as a substitute for lionleum and for decorative purposes in living accommodations.	USSR/Ships - Construction (Contd) Mar/Apr 1947 28197 DNEVNIN, S. G. 28197
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DNIPROV, Yu.Ya.

Needed devices produced by efficiency promoters. Put' i put'khoz. 8
no.8:38-39 '64. (MIRA 17:9)

DNIPROV, Yu. Ya.

Simple proposals. Put' i put. khoz. 8 no. 12327 '62

(MIRA 1832)

DOA, R.

Investigating reactions in a metallurgical MVS cupola furnace.
Lit. proizv. no.9:28-33 S '60. (MIRA 13:9)
(Cupola furnaces) (Cast iron—Metallurgy)

DOAGA, R.

Assimilation of new products in the engineering industry.
Probleme econ 17 no.11:29-41 N.'64.

DOBAGOV, N.S.

IVANOVA, Z.B.; DOBAGOV, N.S.; MALININA, M.S.; POTASHENIN, A.A.

A new preparation for the moist eradication of insects in grain elevators. Seleksiya i Semenovodstvo 17, No.6, 51-3 '50. (MLRA 3:5) (CA 47 no.17:8958 '53)

DOBAI, J.

Developing taste in fine arts. p. 416

Vol. 114, no. 7, July 1955

TERMESZET ES TARSADALOM

Budapest

Source: Monthly list of East European Accessions, (EEAL), LC,
Vol. 5, no. 3, March 1956

BALOGH, T.; DOBAT, A.; SZEGEDI, B.

Incidence of methaemoglobinaemia in a poultry flock. Acta
vet. Acad. sci. Hung. 15 no.1:35-38 '65

1. Central Veterinary Institute (Director: T. Kadar),
Budapest, and Veterinary Institute (Director: O. Prokopovitsch)
Bekescsaba.

HUNGARY

DOBAI, Sandor, Dr., SZEMEREDI, Gyula, Dr.; National Animal Health Institute
(director: KADAR, Tibor, Dr, cand. of vet. sci.) (Orszagos Allategosszegugyi
Intezet).

"On Foot-and-Mouth Disease in Sheep."

Budapest, Magyar Allatorvosok Lapja, Vol 21, No 2, Feb 66, pages 80-82.

Abstract: [Authors' English summary modified] The experiences gathered with FMD in sheep during outbreaks in 1964-65 are described. In the adult sheep, the clinical symptoms of the disease can be very mild and only a very careful examination will reveal the characteristic lesions. The sudden development of massive numbers of lameness and fever of the affected sheep raises the suspicion of the disease. The diagnosis is simple where young lambs are present since they are very susceptible to FMD and many of them succumb within a few days. Focal hyalin degeneration, of the ~~myo-~~**cardium** and consecutive cellular infiltration of it, waxy degeneration of the skeletal musculature as well as, at times, erosions in the mouth eventually surrounded by remnants of vesicles are of diagnostic value. Virological tests are highly accurate in the establishment of the diagnosis. The differential diagnostic aspects of the disease are also discussed and it is concluded that the role of sheep in the spreading of FMD among domestic animals should not be underestimated. All 5 references are Eastern European.
1/1

KERPEL-FRONIUS, E.; GATI, B.; DOBAK, E.; KELEMEN, I.

Effect of a primary change of a single physiological constant
of fluid homeostasis on the remaining constants. Acta med. hun.
15 no.1:207-220 '60.

1. Kinderklinik der Medizinischen Universität, Pecs.
(BODY FLUIDS)

DOBANKOV, A.

More about the double-walled hive. Pzhelovodstvo 29, No 9, 1952.

DOBAL, L.

"Photographic technique helps in industrial production." p. 133

TECHNICKA PRACA. (Rada vedeckych technickych spolocnosti pri Slovenskej akademii vied) Bratislava, Czechoslovakia. Vol. 7, no. 3, 1955.

Monthly List of East European Accessions Index (EEAI) LC, Vol. 8, No. 9, Sept. 1959

Uncl.

DOBAL, L.

Photographic technique helps in industrial production, (Conclusion) p. 372

TECHNICKA PRACA. Czechoslovakia, Vol. 7, No. 8, Aug. 1955

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1969

DOBAL, L.

Small-sized photographic camera. p. 465

TECHNICKA PRACA. Bratislava, Czechoslovakia, Vol. 7, No. 10, Oct. 1955

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

ENTZ, Albert, dr.; DOBAL, Tibor, dr.; SZOTS, Istvan, dr.; DANIEL, Ferenc, dr.

The efficacy of bacteriological examinations during drug therapy.
Tuberkulozis 14 no.11:327-332 N '61.

1. Az Országos Koranyi Tbc Intezet (igazgato-foorvos: Boszormenyi Miklos dr. kandidatus, tudomanyos vezeto: Foldes Istvan dr. kandidatus), a Budapesti Orvostudomanyi Egyetem II sz. Sebészeti Klinikájának (megbizott igazgato: Stefanics Janos dr.) es a Budapest fovarosi XI keruleti Tbc Gondoza Intezet (igazgato-foorvos: Szakkay Antal dr.) kozlemenye.

(ANTITUBERCULAR AGENTS ther)

DOBANOVIC, Branko

Productivity organizations in the world. Produktivnost 3 no.11:752-753
N '61.

Dobary, I.

Investigation of the changes morphologic and size changes of the ears of children from 7 to 18 years old. p. 93.

ANTHROPOLOGIAI KOZLEMENYEK. Budapest, Hungary. Bol. 2, no 3/4, 1958

Monthly list of East European Accessions, (EEAI) LC, Vol. 9, No 1, Jan. 1960
Uncl.

SAVARTSEV, A.; KANTARIYA, A.; DOBARIN, B.; YEVLENT'YEV, N.; (selo Yegorkino
Oktyabr'skogo rayona, Tatarskoy ASSR), OSOTKIN (g.Tyumen');
SHCHERBAKOV (g.Tyumen'); YERDAKOV (g.Tyumen'); VASIL'YEV (g.Tyumen');
RESHETNIK (Tyumen').

In radio clubs of the country. Radio no.12:11-12 D '58.
(MIRA 11:12)

1. Predsedatel' soveta Ryazanskogo radiokluba Dobrovol'nogo obshchestva
sodeystviya armii, aviatsii i flotu (for Savartsev). 2. Nachal'nik
Kuybyshevskogo oblastnogo radiokluba Dobrovol'nogo obshchestva sodey-
stviya armii, aviatsii i flotu (for Kantariya). 3. Nachal'nik radiokluba
(for Osotkin). 4. Starshiy inzh.radiokluba (Shcherbakov). 5. Nachal'nik
uchebnoy chasti (for Yerdakov). 6. Chleny radiokluba (for Vasil'yev,
Reshetnik).

(Radio clubs)

DOBARSKIKH, B.V.

SCARLET FEVER

"The Clinical Picture of Scarlet Fever", by B.V. Dobarskikh, Fel'dsher
i Akusherka, No 4, April 1957, pp 3-7.

A popular presentation of the clinical picture of scarlet fever and
its etiology and of ways of avoiding scarlet fever infection.

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- 73 -

DOBARSKIKH, B.V.

Paroxysmal cold hemoglobinuria. Kaz.med.zhur. no.4:70-71 J1-Ag '62.
(MIRA 15:8)

1. Vrachebno-trudovaya ekspertnaya komissiya (predsedatel' - B.V.
Dobarskikh) Zhelezhodorozhnogo i metallurgicheskogo rayonov
Chelyabinska.

(HEMOGLOBINURIA)

DOBARSKIY, V.

Good beginning. Voenn. znaniya no. 8:8 Ag'55. (MLRA 8:12)

1. Predsedatel' gorodskogo komiteta Dobrovol'nogo obshchestva
sodeystviya armii, aviatsii i flotu, g. Kaliningrad.
(Shooting)

DOBAS, J., and others.

"Arylation with deazonium salts. II. Study on the effect of catalysis, temperature, and substitution of diazonium salt in the course of the reaction with 4-sulfocinnamic acid. In German."

p. 1473 (Collection of Czechoslovak Chemical Communications. Vol. 22, no. 5, Oct. 1957, Praha, Czechoslovakia.)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 7, July 1958

✓ Arylation with dioxonium salts. II. Effects of catalyst temperature and substitution of the dioxonium salts on the rate of the reaction with 4-substituted anisole. The reaction of 4-substituted anisole with 4-substituted dioxonium salts (I) was studied. The results are summarized in Table I. The rate of the reaction decreased with increasing substitution of the dioxonium salt. The rate of the reaction with 4-substituted dioxonium salts (IV) decreased in the order: position 4, 2, and 1. Of substituents the groups OMe, NHCOCH₃, and SO₂CH₃ exert a favorable influence on the reaction, while the groups Cl, Br, and NO₂ exert an unfavorable influence. The reaction of 4-substituted anisole with 4-substituted dioxonium salts (IV) was studied. The results are summarized in Table I. The rate of the reaction decreased with increasing substitution of the dioxonium salt. The rate of the reaction with 4-substituted dioxonium salts (IV) decreased in the order: position 4, 2, and 1. Of substituents the groups OMe, NHCOCH₃, and SO₂CH₃ exert a favorable influence on the reaction, while the groups Cl, Br, and NO₂ exert an unfavorable influence. The reaction of 4-substituted anisole with 4-substituted dioxonium salts (IV) was studied. The results are summarized in Table I. The rate of the reaction decreased with increasing substitution of the dioxonium salt. The rate of the reaction with 4-substituted dioxonium salts (IV) decreased in the order: position 4, 2, and 1. Of substituents the groups OMe, NHCOCH₃, and SO₂CH₃ exert a favorable influence on the reaction, while the groups Cl, Br, and NO₂ exert an unfavorable influence.

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CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, 1958, No 17, 57432.

Author : PirkI J., ~~Dobas J.~~

Inst : Not given.

Title : Synthesis of 4-Amino-4'-Chlorstilbene-2,2'-Disulfocacid.

Orig Pub: Chem. listy, 1957, 51, No 5, 982-983.

Abstract: 4-Amino-4'-chlorstilbene-2,2' disulfo acid (I) synthesized by Zandmeyer's reaction (refer to Ref Zhur-Khimiya, 1956, 52200) from 4-nitro-4'-aminostilbene-2,2'-disulfo acid with subsequent reduction is not a homogeneous substance. It contains impurities of probably 4,4'-bis-(2"-sulfo-4"-aminostyryl)-diphenyl-3, 3'-disulfo acid. It is possible to obtain pure I from 4-benzoylamino-4'-aminostilbene-

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Abs Jour: Ref Zhur-Khimiya, 1958, No 17, 57432.

Abstract: -2,2'-disulfo acid (II). 0.2 moles of the dinitric salt of II dissolved in 1.7 of water at 65-70°, followed by the addition of 96cc of 2.5n NaNO₂, 300 cc of water, 70cc concentrated HCl (acid), and 100 gr of ice (25-30°) result in the formation of a suspension of diazonium salt. When it was added, (after mixing for 12 hours at 20°), to a solution containing 60gr of CuCl in 480cc of concentrated HCl (acid) and 120cc of water at a temperature of 60-70°. The dinitric salt of 4-benzoylamino-4'-chlorstilbene-2,2'-disulfo acid (III) was thus obtained. The dinitric salt of I containing two

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CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, 1958, No 17, 57432.

Abstract: molecule of water was crystalized out by boiling the paste-like III material (obtained in the preceding experiment) for 3 hours in a solution containing 300cc of water and 60gr NaOH (salting out NaCl at 70°) with the yield of 63%.

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DOBAS, J

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Abs Jour: Ref. Zhur.-Khimiya, No II, 1958, 36254

Author : Hanousek. V., Dobas J.

Inst : Not given.

Title : Fluorescent Derivatives of 1,2,3-Triazol.
Introductory Remarks.

Orig Pub: Chem. listy, 1957, 51, No 6, 1101-1102

Abstract: Introductory remarks to various investigations pertaining
to the synthesis and study of properties of certain
derivatives of 1, 2, 3,-Triazol.

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Dobas, J.

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

Author : Dobas Jaroslav, Pirkl Jaromir, Hanousek Vitezslav.

Inst :

Title : Fluorescent Derivatives of 1,2,3-Triazole. I. Sulfonic Acids of Bis-Naphtho-Triazoles Based on p-Phenylene-Diamine, Benzidine, Benzidine Sulfone and Diamino-Diphenyl-Urea. II. Sulfonic Acids of Benzo- and Naphtho-Triazoles Based on 4,4'-Diaminostilbene-2,2'-Disulfonic Acid. III. Sulfonic Acids of Derivatives of Naphtho-Triazole Based on 4-Amino-Diphenyl. IV. Color and Fluorescence of Some Derivatives of 2-Phenylnaphtho-[1,2]-Triazole. V. Acyl-Derivatives of 2-(3' and 4'-Amino-phenyl)-Naphtho-[1,2]-Triazole Sulfonic Acids.

Orig Pub: Chem. listy, 1957, 51, No 6, 1103-1112, 1113-1121, 1122-1126, 1127-1135, 1136-1141.

Card : 1/34

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

Abstract: I. A number of polysulfonic acids of bis-naphthotriazoles have been synthesized, which are derivatives of p-phenylene diamine, benzidine (I), benzidine sulfone, and diaminodiphenyl-urea. Investigated were their color, fluorescence (F) on cellulose, bleaching action on cotton, substantive properties, and absorption in ultraviolet light, with the view of a possible utilization of these compounds as optical clearing agents. It follows from a detailed discussion of correlations between properties and chemical structure that substitution in the naphthotriazole ring has no effect upon substantial changes in optical properties, while substitution by sulfo-groups, chlorine, CH_3 - and CH_3O -groups in the middle portion of the molecule affects considerably the

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

optical and color properties of the derivatives under study, all the properties being altered concomitantly. A considerable role in the retention of desirable properties of optical bleaching agents is played by coplanarity of the molecule. The substances thus obtained are of a relatively low fastness to light. A solution of 0.1 mole of phenyl-diazonium chloride (150 ml) is added dropwise (0-5°, 0.5 hour) to a solution of 0.12 mole of 2-aminonaphthalene-6-sulfonic acid (II) in 1.4 liters of water and 80 ml 2.5 N solution of Na_2CO_3 . After 2 hours at 5° the mixture is heated to 80°, salted out with NaCl, the dyestuff paste is dissolved in 2.5 liters of water at 80° and is oxidized by addition of 150 ml of a solution of NaOCl (0.13 g NaOCl per 1 ml). After

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

dilution with water to 8 liters there are added 250 ml of the NaOCl solution, and by an addition of NaCl 28 g Na-salt of 2-phenyl-naphtho- $[1,2]$ -triazole-7-sulfonic acid are salted out. The dyestuff obtained by coupling 0.1 mole p-nitrophenyl diazonium chloride with 2-naphthylamine-5,7-disulfonic acid (III), is separated by salting out, dissolved in 2.5 liters of water and oxidized with NaOCl. The resulting nitro-triazole is reduced according to Dechamp, without being isolated. After removal of Fe the soda filtrate is salted out and made acid to Congo with HCl (acid), to get the mono-Na salt of 2-(4'-amino-phenyl)-naphtho- $[1,2]$ -triazole-6,8-disulfonic acid, yield 78% (determined volumetrically with NaNO_2).

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

0.05 mole of the acid are diazotized and coupled, in Na_2CO_3 solution, with 0.05 mole III, the dye is salted out and oxidized with NaOCl to the tetra-Na salt of 1,4-bis-(2-naphtho-1,2-triazolyl)-benzene-6', 8', 6'', 8''-tetrasulfonic acid, yield 24 g. An acid solution of 0.05 mole tetrazotized I is neutralized to Brilliant Yellow with a solution of Na_2CO_3 and is coupled at 0 with 0.05 mole II in 400 ml water and 25 ml 2.5 N Na_2CO_3 . The solution of the monoazo-dye is added dropwise at 20-30° to a solution of 0.07 mole III in 600 ml water and 400 ml pyridine, after 15 minutes 300 ml of the liquid are distilled off, the residue is diluted to 1.5 liter and oxidized (boiling for 40 minutes) with 0.22 mole CuSO_4 in 400 ml water and 300 ml 25% NH_4OH . The

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

precipitated Cu-salt of bis-triazole trisulfonic acid is dissolved in 2 liters of 30% pyridine, and a saturated solution of NaCl is used to precipitate, at 90°, 28 g of mono-Na salt of 4,4'-bis-(naphtho- $\begin{smallmatrix} \diagup 1,2 \diagdown \end{smallmatrix}$ -triazolyl)-diphenyl-6",8",7'"-trisulfonic acid (IV). The mono-Na salt of 4,4'-bis(naphtho- $\begin{smallmatrix} \diagup 1,2 \diagdown \end{smallmatrix}$ -triazolyl)-diphenyl -5",9",7'"-trisulfonic acid is prepared analogously, using 1-naphthylamine-4,8-disulfonic acid (V) in the last coupling. Analogously is synthesized the mono-Na salt of 4,4'-bis-(naphtho- $\begin{smallmatrix} \diagup 1,2 \diagdown \end{smallmatrix}$ -triazolyl)-diphenyl-4",7",7'"-trisulfonic acid; the last azo-coupling being carried out with 2-naphthylamine-3,6-disulfonic acid (VI). Coupling of tetrazotized I in Na₂CO₃ medium with III, V or VI, and oxidation

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

of the resulting bis-azo-dyestuff, yielded, respectively, the tetra-Na salt of 4,4'-bis-(2-naphtho- $\underline{1,2}$ -triazolyl)-diphenyl-6'',8'',6'',8''-tetrasulfonic acid, -5'',9'',5'',9''-tetrasulfonic acid, and 4'',7''4'',7''-tetrasulfonic acid. Coupling of 0.01 mole tetrazotized benzidine-3-sulfonic acid with 2-naphthylamine-6-sulfonic acid (VII) in Na₂CO₃ medium, oxidation of resulting dye with CuSCy in NH₄OH, and salting out, yielded 7.5 g tri-Na salt of 4,4'-bis-(2-naphtho- $\underline{1,2}$ -triazolyl)-diphenyl-3,6'',6''-trisulfonic acid. Analogously were synthesized, from benzidine-3,3'-disulfonic acid and VII, and benzidine-2,2'-disulfonic acid and 2,6-naphthylamine sulfonic acid, the tri-Na salts of 4,4'-bis-(2-naphtho- $\underline{1,2}$ -triazolyl)-di-

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

phenyl-3,3',6",6"'- and 2,2',7",7"'-tetrasulfonic acid. Coupling of tetrazotized o-dianisidine with III (gradually, in acid, neutral, and acetate-medium), and oxidation of the dye with CuSO_4 in aqueous pyridine, yielded the tetra-Na salt of 4,4'-bis-(2-naphtho- /1,2/ -triazolyl)-3,3'-dimethoxy-diphenyl-6",8",6"',8"'-tetrasulfonic acid. From tetrazotized o-tolidine and III, in aqueous pyridine, was obtained the tetra-Na salt of 4,4'-bis-(2-naphtho- /1,2/ -triazolyl)-3,3'-dimethyl-diphenyl-6",8",6"',8"'-tetrasulfonic acid. Analogously from 3,3'-dichlor-benzidine and III (in neutral and NaHCO_3 media) the resulting dyestuff yielded on oxidation with CuSO_4 in aqueous pyridine, the tetra-Na salt of 4,4'-bis-

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

(2-naphtho- $\overline{1,2}$ -triazolyl)-3,3'-dichlor-diphenyl-6'',8'',6''',8'''-tetrasulfonic acid. By the action of COCl_2 on di-Na salt of 2-(4''-aminophenyl)-naphtho- $\overline{1,2}$ -triazolyl-6',8'-disulfonic acid, in water in the presence of Na_2CO_3 , was obtained the tetra-Na salt of 4,4'-bis-(2-naphtho- $\overline{1,2}$ -triazolyl)-diphenyl-urea-6'',8'',-6''',8'''-tetrasulfonic acid. Coupling of tetrazotized benzidine sulfone with III (in Na_2CO_3 and oxidation with CuSO_4 in aqueous pyridine) yields the tetra-Na salt of 3,6-bis-(2-naphtho- $\overline{1,2}$ -triazolyl)-diphenylsulfone-6',8',-6'',8''-tetrasulfonic acid. From 3-amino-6-acetylamino-diphenylenesulfone-2-sulfonic acid and VII, in a solution of CH_3CCONa , splitting off of acetyl by boiling with NaOH , further coupling with VII and oxidation of resulting dis-azo-

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

dyestuff (CuSO_4 in NH_4OH), is synthesized the tri-Na salt of 3,6-bis-(2-naphtho-1,2-triazolyl)-diphenylenesulfone-2,6',6"-trisulfonic acid.

II. A number of fluorescent derivatives of benzo- and naphtho-triazole were obtained from 4,4'-diaminostilbene-2,2'-disulfonic acid (VIII). Investigated were the F of these substances on cellulose, their color, bleaching effect on cotton, comparative substantive properties, and absorption in the ultra-violet region. From correlations between chemical structure and F, it follows that the F-carrier is the triazole ring substituted in position 2. The ring substituted in position 1 does not fluoresce in the visible region. F develops only after

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

introduction of amino-group into the nucleus condensed with the triazole ring, the latter being a weak chromophor of an effectiveness equal to the group $=C=O$ or $-CH=N-$. As a result of introduction of amino groups there takes place a bathochromic shift in F and absorption. The substances prepared in the course of this research are faster to light than the naphtho-triazole sulfonic acids described in Communication I. A suspension of 0.025 mole tetrazotized VIII is added dropwise (5-10°, 30 minutes) to a solution of 0.525 mole Na-salt of VII and 0.15 mole CH_3COONa in 500 ml water, the mixture is stirred (5-10°, 2 hours), heated to 80°, 0.075 mole Na CO are added, stirring is continued for 1 hour, then the batch is diluted to 2 liters, 75 ml

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

25% NH_4OH and 0.1 mole CuSO_4 in 200 ml water are added, the mixture is heated to 90-95° within 30 minutes, made acid with 70 ml concentrated HCl , at 60°, and salted out with NaCl to get an 85-90% yield of tetra-Na salt of 4,4'-bis-(2-naphtho-1,2-triazolyl)-stilbene-2,2',6,6''-tetrasulfonic acid (IX), utilized as an optical clarifying agent. If the dyestuff of the preceding experiment is oxidized to IX by means of NaOCl , there are found on paper chromatography (elution with 10% NH_4OH), in addition to IX, spots corresponding, apparently, to 2-(4'-carboxyphenyl)-naphtho-1,2-triazole-6,3'-disulfonic acid (R_f 0.725) and 2-(4'-formyl-phenyl)-naphtho-1,2-triazole-6,3'-disulfonic acid (R_f 0.47). Standard solution for chromatography is obtained by oxidation of

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

a 2% aqueous solution of IX with a 5% solution of KMnO_4 at 80° . Analogously to IX there is obtained from VIII and the corresponding naphthyl-amino sulfonic acids the tetra-Na salts of 4,4'-bis-(2-naphtho- $\underline{1,2}$ -triazolyl)-stilbene-2,2',5'',5'''-tetrasulfo- and -2,2',7'',7'''-tetrasulfonic acid. Tri-Na salt of 4-amino-4'-(2-naphtho- $\underline{1,2}$ -triazolyl)-stilbene-2,2',5''-trisulfonic acid (X) is obtained by the previously described procedure (BIOS, 1945, Misc. Rep. 20, Appendix 15). On interaction 4-nitro-benzoyl chloride with X in aqueous solution at 80° , in the presence of CH_3COONa , there is obtained, after reduction according to Dechamp and salting out, the tri-Na salt of 4-(p-amino-benzoylamino)-4'-(2-naphtho- $\underline{1,2}$ -triazolyl)-stilbene-2,2',5'''-trisulfonic acid

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(XI). Similarly to X is obtained the acid di-Na salt of 4-amino-4'-(2-naphtho- $\begin{smallmatrix} \diagup 1,2 \diagdown \end{smallmatrix}$ -triazolyl)-stilbene-2,2',6"-trisulfonic acid (XII) which is isolated in pure form after conversion of the crude XII to the 4-acetyl derivative, recrystallization of the latter from water, and saponification by boiling with 5% NaOH. Tri-Na salt of 4-benzoylamino-4'-(2-naphtho- $\begin{smallmatrix} \diagup 1,2 \diagdown \end{smallmatrix}$ -triazolyl)-stilbene-2,2',6"-trisulfonic acid is obtained from XII and C_6H_5COCl at 40-50° in 20% pyridine; crystals (from water). 6 g phenyl-isocyanate are added at 10-20° to a solution of 0.04 mole XII in 400 ml water, the mixture is stirred for 12 hours, diluted to 450 ml, heated to 85°, and there is obtained from the filtrate, after cooling, the tri-Na salt of 4-phenyl-ureido-4'-(2-naphtho-

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

[1,2]-triazolyl)-stilbene-2,2',6''-trisulfonic acid. Analogously to XI, p-nitro-benzoylation of XII and reduction of the resulting nitro-benzoyl derivative, gives the tri-Na salt of 4-(p-amino-benzoylamino)-4'-(2-naphtho-[1,2]-triazolyl)-stilbene-2,2',6''-trisulfonic acid. 800 ml of aqueous suspension of 0.1 mole tetrazotized VIII are added within 30 minutes to a solution of 0.22 mole m-phenylene diamine in 1.7 liters water and 0.15 ml soda, the mixture is diluted with 500 ml water, stirred (10 hours) and salted out at 85° to get the corresponding tetra-azo-dye. The latter is dissolved in 2.5 liters of water and after addition of 400 ml 20% NH₄OH and 0.8 mole CuSO₄ in 600 ml water, the solution is heated (95°, 30 minutes), 200 g

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

glycerol and 200 ml 20% NH_4OH are added, and the mixture is heated again (98° , 2 hours). On acidification with 65 ml concentrated HCl at 90° there are obtained 28 g of 4,4'-bis-(2-(5"-amino-benzotriazolyl))-stilbene-2,2'-disulfonic acid. Analogously, the oxidation of the dyestuff (in the presence of pyridine) obtained from VIII and Na-salt of 2,6-toluylene diamine-4-sulfonic acid, gives the Na-salt of 4,4'-bis-(2-(4"-methyl-5"-aminobenzotriazolyl))-stilbene-2,2',7",7"'-tetrasulfonic acid, which is acetylated with an excess of $(\text{CH}_3\text{CO})_2\text{O}$ at 40° in soda solution and isolated by salting out of the corresponding 5"-acetyl-derivative. 0.05 mole of Na-salt of VIII in 300 ml water, 0.1 mole K-salt of 2-nitro-chlorobenzene-4-sulfonic acid and 0.2 mole

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Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

MgO, are heated for 8 hours at $170^{\circ}/8$ atmospheres, diluted to 1 liter, 40 ml 2.5 N NaOH are added at 80° , and from the filtrate are salted out the crude Na-salt of 4,4'-bis-(2"-nitro-4"-sulfo-phenylamino)-stilbene-2,2'-disulfonic acid (XIII), which yields on reduction according to Bechamp the corresponding 2"-amino-derivative (XIV). The latter is dissolved in 800 ml water, acidified with 100 ml 10 N HCl, there are added dropwise 32 ml 2.5 N NaNO_2 at 10° , and there is separated the Na-salt of 4,4'-bis-(1-benzotriazolyl)-stilbene-2,2',5'',5'''-tetrasulfonic acid (XV). 1-methyl-benzotriazole, MP 65° , and 2-methyl-benzotriazole, BP $102^{\circ}/15$ mm, are obtained by the previously described method (Krollpfeiffer F. et al., Liebigs Ann. Chem., 1935, 515, 113). 0.05 mole sulfanilic

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Abs Jour : Ref Zhur-Khim., No 13, 1958, 43397

acid (XVI) in 120 ml alcohol and 40 ml pyridine are boiled for 30 minutes with 0.05 mole O-nitrosoacetanilide and 80 ml glacial CH_3COOH , 2-- ml of liquid are driven off by steam distillation, the residue is boiled (1 hour) with 150 ml 40% NaOH, the resulting dyestuff is filtered off by suction and oxidized with an excess of NaOCl at 80° , to get 1 g of Na-salt of 2-phenyl-benzotriazole-4'-sulfonic acid, crystals (from water). By an analogous sequence of reactions, as in the case of XIII - XV, there is obtained from 2-nitro-chlorobenzene and aniline, the Na-salt of 1-phenyl-benzotriazole-5-sulfonic acid. A solution of 0.2 mole Na-salt of XVI in 300 ml water is mixed with 120 ml 20% CH_3COONa , a solution of 0.2 mole 2,4-dinitro-chlorobenzene in

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Abs Jour : Ref Zhur-Khin., No. 13, 1958, 43397.

300 ml alcohol is added (3 increments, 70°, 2 hours), the mixture is boiled 8 hours, 300 ml of liquid are distilled off, and the residue is cooled to get 44 g of Na-salt of 2,4-dinitro-diphenyl-amine-4'-sulfonic acid, which (0.075 mole) is reduced in 75 ml alcohol with 0.125 mole Na₂S and 0.13 mole NH₄Cl in 15 ml water, to get the Na-salt of 2-amino-4-nitro-diphenyl-amino-4'-sulfonic acid; III. Disulfonic acids of the derivatives of naphthotriazole, based on 4-amino-diphenyl, are characterized by a good clarifying effect on cellulose, but are not - - - - -

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sufficiently fast to light. Derivatives containing in the diphenyl nucleus sulfogroups in ortho-position to the naphtho-triazole nucleus, are less suitable as bleaching agents due to disrupted coplanarity of the molecule. Enhanced F can be attained in these compounds by introduction of acyl-amino groups in para-position of diphenyl nucleus. Substances which contain in this nucleus more atonic groups with free pairs of electrons are characterized by higher substantive properties. Properties of the prepared substances are described (F on cellulose, clarifying effect on cotton, comparative substantive properties). 600 ml of a solution of 0.05 mole xenyl-diazonium chloride (XVII) are added dropwise to a solution of 0.06 mole Na₂S₂O₄ of III in 800 ml water, at

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15, the mixture is made neutral to Congo with NaHCO_3 and stirred for 36 hours while neutralizing its acidity from time to time. Then 15 g Na_2CO_3 are added, the batch is heated to a boil, 0.11 mole CuSO_4 in 100 ml water and 120 ml 20% NH_4OH are added, and heating at 90° is continued for 1 hour; salting out brings about the separation of 26 g di-Na salt of 2-xylyl-naphtho-[1,2]-triazole-6,8-disulfonic acid (XVIII). The dyestuff prepared in an amount of 0.05 mole from Na-salt of III and VII, is salted out, dissolved in 600 ml water and 375 ml pyridine, and oxidized with a solution of 0.11 mole CuSO_4 in 100 ml water and 50 ml 25% NH_4OH . After addition of a solution of 0.02 mole CuSO_4 , and finally of 5 ml of 15% NaOCl , 650 ml of the liquid

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are distilled off, 650 ml water are added, and the batch is acidified with 60 ml HCl (acid). The mono-sulfonic acid is filtered off by suction, dried at 110° , sulfonated ($115-120^{\circ}$, 4 hours) in 200 g 100% H_2SO_4 , and then is isolated the di-Na salt of 2-zenyl-naphtho-1,2-triazol-6,4"(?)-disulfonic acid (XIX). The dyestuff obtained by coupling of 0.05 mole diazotized 4-amino-4'-methoxy-diphenyl with 0.055 mole III in 2 liters of water and 200 ml pyridine, at 50° , is salted out after distilling off the pyridine, oxidized with $CuSO_4$ in aqueous pyridine, and salted out to get 22 g of di-Na salt of 2-(4"-methoxyphenyl)-naphtho-1,2-triazole-6,8-disulfonic acid. The dyestuff (from 0.01 mole 4'-chloroxenyl-diazonium chloride and 0.012 mole III in 200 ml 30% pyridine) is oxidized

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without isolation. The Cu-salt of the product is dissolved in 150 ml water and 50 ml HCl (acid), and salting out yields 4 g of di-Na salt of 2-(4"-chloroxenyl)-naphtho- [1,2] -triazole-6,8-disulfonic acid. The dyestuff obtained from 0.02 mole diazotized 4-amino-diphenyl-3-sulfonic acid and 0.022 mole III in CH₃COONa solution is isolated and yields 1.3 g Na-salt of 2-xenyl-naphtho- [1,2] -triazole-6,3'-disulfonic acid. Dyestuff (from 0.06 mole diazotized 4-amino-4'-acetylamino-diphenyl-3-sulfonic acid and 0.1 mole VII in NaHCO₃ solution) is isolated by salting out and oxidized with CuSO₄ in pyridine, and the acetyl is split off by boiling with 10% HCl to get 34.2 g di-Na salt of 2-(4"-amino-xenyl)-naphtho- [1,2] -triazole-6,3'-di-

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Abs Jour: Ref Zhur-Khim., No13, 1958, 43397.

sulfonic acid (XX, the acid); with $(CH_3CO)_2O$ in $NaHCO_3$ solution at 40° it forms the acetyl derivative which was analyzed as the Ba-salt, $C_{14}H_{16}O_7N_4S_2Ba \cdot 4H_2O$. p-Methoxybenzoyl-, phenacetyl- and phenoxy-acetyl-derivatives of XX are obtained by acylation with the corresponding acid chlorides in 20% aqueous pyridine at $40-80^\circ$ and were analyzed as the Ba-salts.

IV. Investigated were the changes in color and F brought about by introduction of amino-, methoxy- and sulfo-group in the derivatives of 2-phenyl-naphtho-1,2-triazole. Introduction of amino-group in position 4' or 2' of the phenyl residue causes a bathochromic shift in color and F. An

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

amino group in position 3' does not alter the color and causes only a bathochromic shift in F. Introduction of a single sulfo-group in position 4, 5, 6, 7 and 8 of the naphthalene ring produces no substantial effect on either color or F. Introduction of an additional sulfo-group causes a bathochromic shift in color and F. A sulfo- or a methoxy-group in position 2' decreases the F, while in position 3' it induces a hypsochromic shift in absorption, with no change in F. The paper includes ultraviolet spectra of the compounds that were prepared, and data concerning their F and color. 0.1 mole diazotized XVI are added at 15° to a suspension of 0.11 mole of 2-naphthylamine (XXI) in 100 ml pyridine, the mixture is poured in 1 liter

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

of water, stirred for 12 hours, salted out with NaCl, acidified with HCl (to Congo) to get the dye; the latter is oxidized in 2 liters of water (90-95°, NaOCl) and salted out to get 25.8 g of Na-salt of 2-phenylnaphtho- $\begin{smallmatrix} \text{1,2} \end{smallmatrix}$ -triazole-4'-sulfonic acid. The dyestuff $\begin{smallmatrix} \text{from 0.05 mole 4-oxalyl-} \\ \text{amino-aniline-3-sulfonic acid (XXII) and 0.055 mole} \\ \text{XXI} \end{smallmatrix}$ is dissolved in 400 ml water and 100 ml concentrated NH_4OH and oxidized (90°, 0.1 mole CuSO_4 in NH_4OH), the resulting triazole is saponified by boiling (3 hours) with 400 ml 2.5 N NaOH, the product is extracted with water to get 11.2 g Na-salt of 2-(4'-aminophenyl)-naphtho- $\begin{smallmatrix} \text{1,2} \end{smallmatrix}$ -triazole-3'-sulfonic acid (from 40% pyridine). Coupling of 0.1 mole diazotized 4-nitraniline-2-sulfonic acid

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

with 0.11 mole XXI, oxidation of the resulting dye, the same as in the preceding experiment, and reduction of the resulting nitro-triazole, according to Dechamp, yields 18 g of Na-salt of 2-(4'-aminophenyl)-naphtho-[1,2]-triazole-2'-sulfonic acid. Coupling of 0.1 mole diazotized p-nitraniline, at 15°, with a solution of 0.11 mole Na-salt of 1-naphthylamin-3-sulfonic acid in CH₃CCONa solution, oxidation (90-95°, NaOCl), salting out, and Dechamp reduction of the nitro-derivative, yields 6.8 g of technical Na-salt of 2-(4'-aminophenyl)-naphtho-[1,2]-triazole-4-sulfonic acid. Analogously were prepared the Na-salts of the following acids: 2-(4'-aminophenyl)-naphtho-[1,2]-triazole: 5-sulfonic, 6-sulfonic, 7-sulfonic, 8-sulfonic, 6,8-

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry.

G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

disulfonic, 4,7-disulfonic, and also the Na-salts of 2-(2'-aminophenyl)-naphtho- $\overline{[1,2]}$ -triazole-7-sulfonic, 2-(3'-aminophenyl)-naphtho- $\overline{[1,2]}$ -triazole-7-sulfonic, 2-(3'-aminophenyl)-naphtho- $\overline{[1,2]}$ -triazole-6,8-disulfonic, 2-(4'-amino-2'-methoxyphenyl)-naphtho- $\overline{[1,2]}$ -triazole-6-sulfonic, and 2-(2',4'-phenylene-diamino)-naphtho- $\overline{[1,2]}$ -triazole-6-sulfonic. 0.1 mole diazotized XXII are added dropwise at 15° to a solution of Na-salt of VII and 50 g CH_3COONa in 1 liter of water, the mixture is stirred for 12 hours, heated to 70°, made alkaline to Brilliant Yellow, and salted out to separate the dyestuff, which is then oxidized in 500 ml water (90-95°, 0.2 mole CuSO_4 in NH_4OH). The Cu-salt thus obtained is boiled (5 hours) with

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

1 liter of 5% NaOH. The Cu is precipitated with hydrosulfite, and salting out yields 38 g Na-salt of 2-(4'-aminophenyl)-naphtho- $\overline{[1,2]}$ -triazole-3',6-disulfonic acid. Analogously, 0.1 mole diazotized 2-acetamino-5-amino-anisole and 0.11 mole VII yield 4.8 g Na-salt of 2-(3'-methoxy-4'-aminophenyl)-naphtho- $\overline{[1,2]}$ -triazole-6-sulfonic acid.

V. Among the prepared acyl-derivatives of some amines, which are derivatives of 2-phenylnaphtho- $\overline{[1,2]}$ -triazol-sulfonic acids, the di-Na salts of 2-(4'-benzoylamino-phenyl)- (XXIII), 2-(4'-phenylureido-phenyl)- (XXIV) and 2- $\overline{[4'(4''\text{-amino-6''-}$

Card : 29/37

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

hydroxy-triazinyl-(2'')-amino-phenyl-1-naphtho-
1,2-triazole-6,8-disulfonic acid (XXV) are
characterized by a strong bleaching effect on cellulose, but they are of low fastness to light. Acylation of the amino-group of the phenyl residue, in position 4' or 3', produces a hypsochromic shift in F-color while the absorption itself is not altered. The paper includes ultraviolet spectra of absorption of the prepared substances, data on their F on cellulose in acidic and alkaline media, bleaching effect on cotton, and their relative substantive properties. 0.03 mole $(CH_3CO)_2O$ are added dropwise to a solution of 0.01 mole Na-salt of 2-(3'-aminophenyl)-naphtho-1,2-triazole-6,8-disulfonic acid in 30 ml water and 24 ml 2.5 N

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khin., No 13, 1958, 43397.

Na_2CO_3 , at 40° ; the mixture is heated to 80° and salted out to get 2 g of Na-salt of 2-(3'-acetaminophenyl)-naphtho- $\langle 1,2 \rangle$ -triazole-6,8-disulfonic acid (crystals from NaCl-solution). Analogously are obtained the Na-salts of: 2-(4'-acetaminophenyl)-naphtho- $\langle 1,2 \rangle$ -triazole-7'-sulfonic acid, and 2-(4'-acetaminophenyl)-naphtho- $\langle 1,2 \rangle$ -triazole-4,7-disulfonic acid, and 2-(3'-acetaminophenyl)-naphtho- $\langle 1,2 \rangle$ -triazole-4,7-disulfonic acid, and 2-(3'-acetaminophenyl)-naphtho- $\langle 1,2 \rangle$ -triazole-7-sulfonic acid. 0.1 mole 4-nitraniline-2-sulfonic acid are boiled (15 minutes) with 100 ml $(\text{CH}_3\text{CO})_2\text{O}$, the resulting acetyl-derivative is reduced according to Dechamp, the solution is made acid and diazotized with 0.075 mole NaNO_2 , the resulting suspension of the diazo-compound is added dropwise to a

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour; Ref Zhur-Khim., No 13, 1958, 43397.

solution of 0.1 mole Na-salt of VII and 50 g CH_3COONa in 700 ml water. The batch is stirred (3 hours), salted out, and the resulting dyestuff is oxidized in 300 ml 20% pyridine with 0.18 mole CuSO_4 in 200 ml water, to get 35 g of Na-salt of 2-(4'-acetaminophenyl)-naphtho-[1,2]-triazole-6,3'-disulfonic acid; Ba-salt $\text{C}_{18}\text{H}_{12}\text{O}_7\text{N}_4\text{S}_2\text{Ba} \cdot 4\text{H}_2\text{O}$. A suspension of mono-Na salt of 2-(4'-aminophenyl)-naphtho-[1,2]-triazole-6,8-disulfonic acid (XXVI) in 20 ml diethyl aniline and 8 ml $\text{C}_2\text{H}_5\text{COCl}$ is heated for 15 minutes to a boil, then 6 g Na_2CO_3 in 250 ml water are added to the solution, the diethyl aniline is distilled off with steam, and the residue is salted out to get 2.3 g of XXIII. 3 ml

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CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

of phenyl isocyanate are added to 0.01 mole XXVI in 350 ml water, at 30°, the mixture is stirred (7 hours), the residue is filtered off by suction at 85°, and salting out yields 5.5 g XXIV. 2.4 g cyanuric chloride in 10 ml acetone are added dropwise to 0.01 mole XXVI in 35 ml water, at 0-3°, then 4 ml 2.5 N Na₂CO₃ are added (1 hour), the batch is cooled to 10°, 30 ml 25% NH₄OH are added, the batch is allowed to stand for 15 hours, and is then heated to 70° and salted out to get 6 g of di-Na salt of 2-[4'-(4"-amino-6"-hydroxy-triazinyl-(2")-amino)-phenyl]-naphtho-[1,2]-trazole-6,8-di-sulfonic acid. 24 g of fused m-ONC₆H₄COCl are added to 0.1 mole XXVI in 500 ml water and 50 ml pyridine, at 60-70°, the mixture is stirred for 25 minutes, the resulting nitro-compounds are reduced according to

Card : 33/34

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43397.

Bechamp, and slated out to get 40 g di-Na salt of 2-4'-(3''-amino-benzoylamino)-phenyl-1-naphtho-1,2-triazole-6,8-disulfonic acid (the acetyl-derivative was obtained). Analogously, from XXVI and p-O₂NC₆H₄COCl is obtained the di-Na salt of 2-4'-(4''-amino-benzoylamino)-phenyl-1-naphtho-1,2-triazole-6,8-disulfonic acid, from which the acetyl-derivative was prepared.

Card : 34/34

DOBAS JAROSLAV

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and
Their Application, Part 3. - Industrial Synthesis
of Dyes.

H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 71728.

Author: Jaroslav Dobas.

Inst :

Title : Paper Chromatography of Acid Triphenylmethane Dyes.

Orig Pub: Chem. listy, 1957, 51, No 6, 1202-1203; Collect.
czechosl. chem. communs, 1958, 23, No 1, 146-148.

Abstract: The acid triphenylmethane dyes (Na salts of sulfo
acids) are qualitatively separated by descending
paper (Watmann No. 4) chromatography in the two-
phase system butanol-pyridine-water (3 : 1 : 3).
Before chromatographing the paper is treated 10 to
15 hours with vapors of the aqueous phase or steam.

Card : 1/2

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and
Their Application, Part 3. - Industrial Synthesis
of Dyes.

H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 71728.

The values of R_f in the atmosphere of vapors of the
aqueous phase (steam) are as follows: Acid Brilliant
Green 6 B - 0.36 (0.57), Chlorine Green - 0.49 (0.64),
Acid Violet 5BN - 0.37 (0.59), Acid Violet 5B - 0.51
90.65), Acid Blue V - 0.24 (0.49), Acid Blue A - 0.54
(0.68), Bright Green SF - 0.04 (0.14), Acid Violet
6B - 0.29 (0.34), Brilliant Indocyanine (6B - 0.76),
Acid Fast Violet ARR - 0.91 (0.89).

Card : 2/2

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77690.

Author : Dobas, J. and PirkI, J.

Inst : Not given.

Title : Fluorescent Derivatives of 1,2,3-triazole. VI.
Sulfonic Acids of 2-styrylnaphtho-(1,2)-triazole.

Orig Pub: Chem Listy, 51, No 12, 2330-2333 (1957) (in Czech).

Abstract: The synthesis of sulfonia acid derivatives of naphthotriazoles, possessing blue-violet fluorescence or greenish-blue color with satisfactory light fastness on cotton- and nitrogen-containing fibers, is described. Preparation: 0.05 mol of the Na salt of 2-(4'-aminophenyl)-naphtho-(1,2)-triazole-6,8-disulfonic acid in 90 ml water is diazotized with 20 ml 2.5N NaNO_2 in 200 ml water,

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CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77690.

Abstract: 20 conc HCl, and 200 gms of ice at 0-5°, followed by salting out with NaCl; the diazo solution is added to a solution of 7.5 gms cinnamic acid in 300 ml acetone, 20 ml of a 30% solution of CH₃COONa (I) and a solution of 15 gms CuCl₂·2H₂O in 50 ml water are added, and the solution is heated to 40-45° and stirred for 40 min; following separation of the acetone by steam distillation, extraction with C₆H₆, and the addition of I, 1.7 gm of a substance (II) is obtained; this product is converted to the Ba salt. The addition of a suspension of the diazonium compound prepared from 0.04 mol of the Na salt of 2-(4'-aminophenyl)-naphtho-(1,2)-triazole-6-sulfonic acid to a sol-

Card 2/6

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic G-2
Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77690.

Abstract: ution of 15 gms p-HO₃ SC₆ H₄ SCH = CHCOOH (III)
in 150 ml water, followed by the addition of 75
ml of a 20% solution of I, 20 ml of 5% CuCl₂.2 H₂O,
and 1 gm of Cu powder, stirring for 90 min, and
salting out gives 2 gms of substance IV. The same
product is obtained by the diazotization of 0.01
mol of 4-aminostilbene-4'-sulfonic acid (V), by
reacting the diazo compound with 0.015 mole of
the Na salt of 2-naphthylamino-5-sulfonic acid (VI)
in a solution of I, (8 hrs, 20°), followed by
alkalinization, salting out of the dye with NaCl,
and oxidation in 100 ml water with 5 gms of
CuSO₄.5H₂O in 30 ml water and 20 ml of 25% NH₃

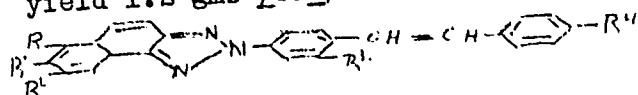
Card 3/6

30

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77690.

Abstract: until the solution is bleached while boiling; yield 1.2 gms [sic].



II $R = R^2 = SO_3Na$, $R^1 = R^3 = R^4 = H$; IV $R = R^4 = SO_3Na$,

$R^1 = R^2 = R^3 = H$; VII $R = R^3 = R^4 = SO_3Na$, $R^1 = R^2 = H$; IX

$R^1 = R^3 = R^4 = SO_3Na$, $R = R^2 = H$; X $R = R^2 = R^4 = SO_3Na$;

$R^1 = R^3 = H$

11 gms of substance VII were obtained by a procedure similar to that used in the preparation of IV, using the Meerwein reaction and 0.02 mol of

Card 4/6

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry. G-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77690.

Abstract: the diazotized Na salt of 2-(4'-aminophenyl)-naphtho-(1,2)-triazole-6,3'-disulfonic acid and III. As in the case of IV, VII was also synthesized by the diazotization of 4-aminostilbene-2,4'-disulfonic acid (VIII), followed by salting out and reaction of the diazonium compound with VI in I, salting out of the dye obtained, and oxidation of the latter with an ammoniacal solution of CuSO_4 while boiling. The yield is 4.5 gms. The substance IX was prepared by a procedure similar to that used above by diazotizing VIII and reacting the diazonium compound with the Na salt of 2-aminonaphthyl-6-sulfonic acid with subsequent oxidation of the product obtained. The reaction of the diazonium compound from V with the

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DOBAS, J.

SCIENCE

Periodical COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CHEKHOSLOVATSKIKH
KHIMICHESKIKH RABOT. Vol. 23, no. 1, Jan. 1958.

DOBAS, J. Paper chromatography of triphenylmethane acid dyes. In German, p. 146.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

CZECHOSLOVAKIA / Organic Chemistry, Synthetic Organic Chemistry. 4-2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 77603.

Author : PirkI, J. and Dobas, J.

Inst : Not given.

Title : On the Synthesis of 4-amino-4'-chlorostilbene-2,
2'-disulfonic Acid.

Orig Pub: Collect Czechoslov Chem Commun, 23, No 1, 152-154
(1958) (in German with a Russian summary).

Abstract: See RZhKhim, 1958, 57432.

Card 1/1

CZECHOSLOVAKIA/Organic Chemistry. Synthetic Organic Chemistry G-2

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81695.

Author : Dobas J., PirkI J., Hanousek V.

Inst :

Title : The Fluorescent Derivatives of 1,2,3-Triazole. I The Sulfo acids, bis-Naphthotriazoles, Based on p-phenylene diamine, benzidine, benzidine sulfone, and diaminodiphenyl urea. II. The sulfo acids, benzo and naphthotriazoles based on 4-aminodiphenyl. III. The Coloration and Fluorescence of Some Derivatives of 2-phenylnaphtho-1,2-triazole

Orig Pub: Collect czechosl. chem. commun., 1958, 23, No 2, 280-290; No 5, 911-926; 926-931.

Abstract: See R. Zh Khim., 1958, 43397.

Card : 1/1

CZECHOSLOVAKIA/Optics - Luminescence.

Abs Jour : Ref Zhur - Fizika, No 6, 1959, 14133

Author : Dobas, J., Pirkel, J., Handusek, V.

Inst :

Title : Fluorescent Derivatives of 1,2,3 Triazol. III. Sulphonic
Acids of Derivatives of Naphtotriazols, Based on 4-amino-
diphenol.

Orig Pub : Collect. Czechosl. chem. commun., 1958, 23, No 5, 926-931

Abstract : Translation from Chem. listy 1957, 51, 1122.

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Country	: Czechoslovakia	G-2
Category	: Organic Chemistry. Synthetic Organic Chemistry	
Abs. Jour.	: Ref. Zhur/-Khimiya No. 6, 1959	19488
Author	: Dobas, J.; PirkI, J.; Hanousek, V.	
Institut.	:	
Title	: Fluorescent Derivatives of 1,2,3-Triazole. IV. Color and Fluorescence of Some Derivatives of 2-Phenyl-naphtho-[1,2]-Triazole. V. Acyl *	
Orig Pub.	: Collect. czechosl. chem. commun., 1958, 23, No 7, 1346-1356, 1357-1363.	
Abstract	: See RZhKhim, 1958, 43397.	

Card:1/1

COUNTRY : Czechoslovakia G-2
CATEGORY : Organic Chemistry--Synthetic organic chemistry
ABS. JOUR. : RZKhim., No. 16 1959, No. 57147
AUTHOR : Dobas, J., Pirk1, J., and Hanousek, V.
INST. : Not given
TITLE : Fluorescent Derivatives of 1,2,3-triazole. VII.
Sodium Salts of Some Bis- and Tris-triazolesul-
fonic Acids
ORIG. PUB. : Chem Listy, 52, No 7, 1310-1313 (1958)
ABSTRACT : The authors have synthesized the Na salts of
a number of bis- and tris-triazolesulfonic acids
(I-V) and have determined their brightening ef-
fect, fastness to light on cotton yarns, and
directness. The starting materials used in
the synthesis were derivatives of 5-aminobenzo-
triazole (VI), obtained by the oxidation of
azo dyes following coupling of the diazo
compounds of aniline, sulfanilic acid, or
naphthionic acid with m-phenylenediamine. The
CARD: 1/9

COUNTRY : Czechoslovakia
CATEGORY :

G-2

ABS. JOUR. : RZKhim., No. 16 1959, No.

57147

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : characteristic properties of I-V were determined by methods described earlier (RZKhim, No 24, 1958, 81695) (the compound, hue of the compound's fluorescence on cellulose, the relative directness factor R_d expressed in terms of the distance from the spot formed by the test compound relative to that of the spot formed by the standard (4,4'-bis-(2-naphtho-(1,2)-triazolyl)-3,3'-dichlorodiphenyltetra-sulfonate-6'',8'',6'',8'' of sodium) during

CARD: 2/g

COUNTRY	:	Czechoslovakia	G-2
CATEGORY	:		
ABS. JOUR.	:	RZKhim., No. 16 1959: No.	57147
AUTHOR	:		
INST.	:		
TITLE	:		
ORIG. PUB.	:		
ABSTRACT	:		

paper chromatography, and the brightening effect
on cotton are given in that order): I, blue-
violet(BV), 0.2, 2; II, BV, 0.16, 2; III, blue-

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COUNTRY : Czechoslovakia G-2
CATEGORY :
ABS. JOUR. : RZKhim., No. 16 1959, No. 57147
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :
ABSTRACT : BV, 0.36, 1-2; IV, blue-BV, 0.07, 2; V, BV, 0.03, 2-3. The light-fastness of I-V on cotton fibers is greater than that of bis-triazoles based on p-phenylenediamine, benzidine, and similar compounds but less than that of derivatives containing a stilbene residue. The brightened yarn shows an insignificant tendency to yellowing on exposure to light. I is synthesized from the diazotized Na-salt of 2-(4'-sulfophenyl)-VI (0.03 mol) which is added dropwise (30 min)

CARD: 4/9

COUNTRY	:	Czechoslovakia	G-2
CATEGORY	:		
ABS. JOUR.	:	RZKhim., No. 16 1959, No.	57147
AUTHOR	:		
INST.	:		
TITLE	:		
ORIG. PUB.	:		
ABSTRACT	:	<p>in the form of a suspension to a solution of 0.033 mol of sodium 2-naphthylamino-5-sulfonate (VII) in 150 ml water together with 100 ml 20% CH₃COOH. After stirring for 1 hr the mixture is heated to 80° and made alkaline with 10 gms soda. The dye is salted out with 50 gms NaCl, dissolved in 300 ml water, 20 ml 20% NH₃, and 40 ml C₂H₅N, and oxidized at 80-90° with an ammoniacal solution of 0.12 mol CuSO₄; salting out gives 13 gms of I dihydrate. II is synthe-</p>	

CARD: 5/9