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SOV/126-6-4-1/34

Paramagnetic Lattice Relaxation Times for Salts of Paramagnetic Ions in S-States

same order of magnitude as the experimental value (Ref.4). In the case of Mn^{++} the calculated relaxation time is higher by 2 orders of magnitude than the experimental values. It is therefore suggested that magnetic interactions play a decisive role in the relaxation mechanism for Mn^{++} salts. The temperature dependence in the latter case is also in conflict with the experimental data. The importance of magnetic interactions becomes less on dilution and for sufficiently high dilutions the relaxation should be determined by the mechanism adopted in the present paper. Final conclusion as to the validity of the present calculation will only be possible when further

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SOV/126-6-4-1/34

Paramagnetic Lattice Relaxation Times for Salts of Paramagnetic Ions in S-States

experimental results are available on the relaxation times as functions of dilution. There are no figures, 1 table and 8 references of which 4 are Soviet, 1 Dutch and 3 English.

ASSOCIATION: Kazanskiy Gosudarstvennyy Universitet (Kazan' State University)

SUBMITTED: 27th November 1956.

Card 5/5

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

AUTHOR: Bashkirov, Sh. Sh. SOV/56-34-6-13/51

TITLE: The Paramagnetic Lattice Relaxation in the Hydrated Salts of Bivalent Copper (Paramagnitnaya reshotochnaya relaksatsiya v gidratirovannykh solyakh dvukhvalentnoy medi)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 34, Nr 6, pp 1465-1469 (USSR)

ABSTRACT: For some salts of this type detailed investigations of the static susceptibility and of the paramagnetic resonance spectra were carried out; experimental data concerning the spin-lattice relaxation were obtained. This paper reports in a detailed manner on some results of these investigations and uses them for the calculation of the spin-lattice relaxation. First a wave function is given for the system of the orbital levels of the ion Cu^{++} in the electrical field of the crystal. An expression given by R. L. Kronig is used as Hamiltonian. The author investigates also the relaxation which is caused by the combination scattering of the phonons. An expression for the relaxation probability is derived in the usual way and therefrom one obtains a rather long expression for the time of the spin-lattice relaxation ϱ.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

SOV/56-34-6-13/51

The Paramagnetic Lattice Relaxation in the Hydrated Salts of Divalent Copper

The numerical value of Q is computed for the crystal $CuSO_4 \cdot 5H_2O$. The values of Q are given for some directions of the external magnetic field. The theoretically calculated dependence of the relaxation time on the orientation of the crystal $CuSO_4 \cdot 5H_2O$ in an external magnetic field H_0 agrees rather well with the experimental results of T. I. Volkhova (Ref 9). The author thanks S. A. Al'tshuler for the proposition of this theme and for useful remarks. There are 1 figure and 12 references, 2 of which are Soviet.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet (Kazan' State University)

SUBMITTED: April 27, 1957 (initially) and February 27, 1958 (after revision)

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

AUTHORS: Valiyev, K. A., Bashkirov, Sh. Sh. SOV/56-35-1-54/59

TITLE: A Stimulated Amplifier of Radio-Frequency Signals on the Basis of the Hyperfine Sublevels of Paramagnetic Atoms (Stimulirovannyy usilitel' radiochastotnykh signalov na sverkhtonkikh podurovnyakh paramagnitnykh atomov)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 35, Nr 1, pp. 302 - 303 (USSR)

ABSTRACT: The idea of applying paramagnetic crystals as working piece of stimulated amplifiers for centimeter waves was conceived by N.Bloembergen (Blombergen) (Ref 1). Such an amplifier was constructed on the basis of the salts of the Gd^{3+} ion, using the dipole-transitions between the sublevels of the energy of the electron spins of the paramagnetic Gd^{3+} ions. Some previous papers concerning this subject are mentioned. The authors of this paper wish to draw attention to the possible amplification of 10^8-10^9 Hertz signals by application of the transitions between the hyperfine sublevels of the paramagnetic ions. As an example, the crystals of the salts of the divalent ions of Cu^{64} (ground state ^2D, S= 1/2, I= 1) are investigated. The con-

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

A Stimulated Amplifier of Radio-Frequency Signals on the Basis of the Hyperfine Sublevels of Paramagnetic Atoms SOV/56-35-1-54/59

clusions obtained in this paper seem to be applicable also to other paramagnetic atoms. The scheme of the spin sublevels of Cu^{++} in a strong magnetic field is shown in a figure, and also the numerical values of the probabilities of the relaxation transitions are given. In pulsed schemes with pulses of 10^{-4} sec, the power yield may attain values of $\sim 10^{-3}$ W. The authors thank S.A.Al'tshuler for the discussion of results. There are 1 figure and 6 references, 1 of which is Soviet.

ASSOCIATION: Kazanskiy pedagogicheskiy institut (Kazan' Pedagogical Institute)

SUBMITTED: April 15, 1958

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

24(5)

AUTHORS: Bashkirov, Sh. Sh., Valiyev, K. A.

SOV/56-35-3-18/61

TITLE: On the Polarization of the Nuclear Moments and the Width of Nuclear Resonance Lines in Crystals of Cu^{++}-Ion Salts (O polyarizatsii yadernykh momentov i shirine liniy yadernogo rezonansa v kristallakh soley iona Cu^{++})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 3, pp 678-684 (USSR)

ABSTRACT: In the introduction several papers dealing with this subject, which have already been published (Refs 1-7), are discussed (as e.g. on the investigation of the degree of polarization of the magnetic moments at 1 - 4°K, experiments carried out concerning the polarization of nuclei with the aid of electron transitions; Feher (Fekher) investigated the nuclear polarization of paramagnetic atoms; investigation of transition probabilities (Refs 5-7)). The present paper aims at calculating the probabilities of nuclear relaxation transitions in Cu^{++}-ion salts $a_{m,m-1}$ and the probability of electronic transitions $A_{M,M-1}$ (M = magnetic quantum number of electron spin) (such

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

On the Polarization of the Nuclear Moments and the Width of Nuclear Resonance Lines in Crystals of Cu^{++}-Ion Salts

SOV/56-35-3-18/61

calculations of nuclear- and electronic relaxation transitions for S = 1/2 and I = 1/2 have already been carried out by Abraham (Abragam) (Ref 2)). The amount of nuclear polarization occurring as a result of the saturation of electron- and nuclear resonance transitions is calculated. The chapters of this paper deal with the following subjects: 1) Introduction; 2) Probabilities of nuclear relaxation transitions (ansatz for transitions between hyperfine sublevels: $\mathcal{H} = \mathcal{H}_{OL} + \lambda(\vec{L}\vec{S}) + AI_zS_z + B(I_xS_x + I_yS_y)$; $\lambda(\vec{L}\vec{S})$ - spin-orbital interaction, $\mathcal{H}_{OL}$ - an operator, ansatz for H_{OL} according to Kronig (Ref 8)); 3) Polarization of Cu^{64} nuclei in paramagnetic salts; (I = 1) 4) On the breadth of paramagnetic resonance lines on the nuclei of paramagnetic atoms - the effect of electron and nuclear relaxations on the broadening of lines is considered. There are 1 figure and 15 references, 5 of which are Soviet.

Card 2/3

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

SOV/56-35-3-18/61

On the Polarization of the Nuclear Moments and the Width of Nuclear Resonance Lines in Crystals of Cu^{++}-Ion Salts

ASSOCIATION: Kazanskiy gosudarstvennyy pedagogicheskiy institut (Kazan' State Pedagogical Institute)

SUBMITTED: March 2, 1958

Card 3/3

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

31513
S/058/61/000/010/045/100
A001/A101

24.7900 (1144, 1147, 1163)

AUTHOR: Bashkirov, Sh.Sh.

TITLE: On the theory of paramagnetic spin-lattice relaxation due to two-phonon processes

PERIODICAL: Referativnyy zhurnal. Fizika, no.10, 1961, 164, abstract 10V360 (V sb. "Paramagnitn. rezonans", Kazan', Kazansk. un-t, 1960, 54-57)

TEXT: The author considers a case when paramagnetic spin-lattice relaxation is brought about by such two-phonon processes in which transitions between the levels of a magnetic ion are accompanied by simultaneous emission or absorption of two elastic quanta. Particular calculations are performed for the Ti^{3+} ion in titanium-cesium alum. It is shown that the probability of transition between the lower orbital levels is equal to $A \approx 10^{18}$; 10^{17} and 10^{12} sec^{-1} at temperatures 195; 77 and 20°K respectively, if one assumes that these levels are separated by energy intervals of 200 cm^{-1}. The indicated A-values explain the fact that paramagnetic resonance in hydrated titanium compounds can be observed only at temperatures below the hydrogen temperature. Moreover, it is

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On the theory of paramagnetic spin-lattice ...

shown that the time of longitudinal relaxation of Ti^{3+} ions is so short that its direct measurement by the parallel field method is practically unrealizable, even at extremely low temperatures.

V. Avvakumov

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

38353
S/058/62/000/005/065/119
A057/A101

24.7900

AUTHOR: Bashkirov, Sh. Sh.

TITLE: Theory of acoustic paramagnetic resonance in hydrated compounds of bivalent copper

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962, 46-47, abstract 5G423 (V sb. "Primeneniye ul'traakust. k issled. veshchestva", no. 13, Moscow, 1961, 189-192)

TEXT: The author investigated paramagnetic resonance absorption of ultrasonic waves in paramagnetic crystals due to transitions between the levels of the spin system, which were effected by sound oscillations of the lattice in presence of a constant magnetic field. The coefficient of absorption of UW is calculated for crystals of hydrated salts of bivalent copper. The paramagnetic ion is in such crystals in a strong electric field, which is formed by the surroundings. The sound oscillations of the lattice effect an alternating electric field, which disturbs the motion of the orbital electrons of the ion. These disturbances cause transitions between the levels of the spin system due to the

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presence of spin-orbital interaction. The obtained coefficient of absorption is highly anisotropic, and the magnitude of this absorption for Cu^{2+} compounds is small in comparison to other paramagnetics.

A. Polyakova

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

23117

S/181/61/003/005/022/042
B136/B201

24.7900 (1163, 1395, 1482)

AUTHORS: Al'tshuler, S. A., Bashkirov, Sh., and Leushin, A. M.

TITLE: Theory of acoustic paramagnetic resonance in crystals containing ions of the iron group

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5, 1961, 1501-1504

TEXT: The authors have calculated the coefficient of resonance absorption σ of ultrasonics in crystals, in which the paramagnetic ion of the iron group is surrounded by the octahedron of the nearest diamagnetic particles. If the spin Hamiltonian for the paramagnetic ions is known, σ may be calculated for transitions between spin levels and for an arbitrarily oriented magnetic field using methods of the paramagnetic spin-lattice relaxation theory. For $S > 1/2$, the quadratic spin operator F enters the formula for the said coefficient: $\sigma_{\alpha\beta} = Pqv^2|\langle\alpha|\hat{F}|\beta\rangle|^2$, where α and β are the spin levels between which a transition takes place; P is given by

$$P=\frac{9\pi^2 N}{kTv^3\nu_{1/2}d}\left(\frac{ee'}{R^2}\right)^2\left(\frac{r^2}{R^2}\right)^2. \qquad (2)$$

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Theory of acoustic ...

N is the number of paramagnetic centers per unit volume, d is the crystal density, v and ν are the velocity and frequency of ultrasonics, R is the equilibrium distance between the paramagnetic ion and its diamagnetic neighbors (charge e'), $\overline{r^2}$ is the mean square distance of the 3d electron from the nucleus; q is a structure constant, and $\nu_{1/2}$ is the resonance-absorption-line width. $\hat{F} = \sum_{i,k=x,y,z} a_{ik}\hat{S}_i\hat{S}_k$. (4) is valid here.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

Ni^{2+} in a tetragonal field	Cr^{3+} in a trigonal field
$a_{xx} = -a_{yy} = 3(\lambda_y\Phi_y - \lambda_x\Phi_x)$,	$a_{xx} = -a_{yy} = \lambda_y\Phi_y - \lambda_x\Phi_x + 0.54(\lambda_y\Phi_x + \lambda_x\Phi_y - \lambda_x\Phi_z - \lambda_z\Phi_x)$,
$a_{zz} = 3(\lambda_x\Phi_x + \lambda_y\Phi_y - 2\lambda_z\Phi_z)$,	$a_{zz} = 4.62(\lambda_x\Phi_x + \lambda_y\Phi_y - 2\lambda_z\Phi_z)$,
$a_{xy} = a_{yx} = -\frac{16}{35}(\lambda_x\Phi_y + \lambda_y\Phi_x)$,	$a_{xy} = a_{yx} = -\lambda_x\Phi_y - \lambda_y\Phi_x + 3.08(\lambda_x\Phi_x + \lambda_y\Phi_y) - 0.54(\lambda_x\Phi_z + \lambda_z\Phi_x + \lambda_y\Phi_z + \lambda_z\Phi_y)$.
$a_{zx} = a_{xz} = -\frac{16}{35}(\lambda_x\Phi_z + \lambda_z\Phi_x)$.	$a_{xz} = a_{zx} = \lambda_x\Phi_z - \lambda_y\Phi_y + 0.54(\lambda_x\Phi_y + \lambda_y\Phi_x) - 3.54(\lambda_x\Phi_z + \lambda_z\Phi_x)$,
$a_{yz} = a_{zy} = -\frac{16}{35}(\lambda_y\Phi_z + \lambda_z\Phi_y)$,	$a_{yz} = a_{zy} = -\lambda_x\Phi_x + \lambda_y\Phi_y - 0.54(\lambda_x\Phi_y + \lambda_y\Phi_x) + 3.54(\lambda_y\Phi_z + \lambda_z\Phi_y)$.

(4)

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If, however, S = 1/2 (Ti^{3+}, Cu^{2+}, etc.) the operator $\hat{F}$ may be used to express the absorption coefficient as a linear function of the spin components. Estimations of S for these two cases are given in Tables 1 and 2. The striking difference between the values is, however, not so remarkable when considering how strongly the spin-lattice relaxation times differ for different ions. Calculations are performed for ideal crystals. The defects which are always present in the practice, require that sound waves scattered by the defects be taken into account. If the sound-wave amplitude is independent of the frequency, lattice vibrations caused by the scattered waves will depend on the spin system to a much greater extent than do vibrations caused by plane waves. This has been shown by Kochelaev (Ref.3: DAN USSR, 131, 1053, 1960). If S' > 1/2, σ will become independent of frequency; if, however, S' = 1/2, $\sigma \sim \gamma^2$. An experimental verification have to be based upon the following considerations: If it is conducted at a low temperature, at which the spin-lattice relaxation can be explained by single-phonon processes, it will not be possible to measure the absolute value of the absorption for ultrasonics, because the saturation factor depends upon the ratio of the transition probability between spin levels under the action of ultrasonics to the probability of a relaxation transi-

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tion which is caused by thermal vibrations of the lattice. Instead, it is possible to clarify the dependence of resonance absorption on direction and polarization of sound waves and the magnetic field strength. There are 2 tables and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The most recent reference to English-language publication reads as follows: H. Van Vleck, Phys. Rev., 57, 426, 1940.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet imeni V. I. Ul'yanova-Lenina (Kazan' State University imeni V. I. Ul'yanov-Lenin)

SUBMITTED: October 21, 1960

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

S/181/62/004/011/045/049
B108/B186

AUTHORS: Bashkirov, Sh. Sh., and Kopvillem, U. Kh.

TITLE: Spin-spin interaction between the nuclei of paramagnetic ions through the phonon field

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3340-3342

TEXT: It is shown that at very low concentrations ($C \ll 1$) of the magnetic centers an exchange between nuclear spins is possible via virtual phonons in dielectric paramagnetic crystals also. The interaction is assumed to be materialized by the annihilation and production of magnons, accompanied respectively by the emission of phonons from the magnetic ions and the absorption of phonons on them. This production and annihilation of magnons can be materialized by (1) transition of the nucleus between hyperfine sublevels of the magnetic ion and (2) mutual reorientation of the nuclear (I) and electron spins (S). An interaction of the type (2) is likely to be weak in paramagnetic substances. In case (1), where the interaction of the nuclear spin with the lattice goes through a hyperfine interaction of the nucleus with the electron and through spin-orbit coupling, the intensity of the exchange interaction decreases as $1/R^3$ (R is the distance

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

AL'TSHULER, S.A.; BASHKIROV, Sh.Sh.; ZARIPOV, M.M.

Paramagnetic resonance and spin-lattice relaxation of Ti^{3+} ions in corundum. Fiz.tver.tela 4 no.12:3367-3372 D '62. (MIRA 15:12)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina.

(Paramagnetic resonance and relaxation)
(Titanium) (Corundum)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROV, Sh.Sh.; KOPVILLEM, U.Kh.

Spin-spin interaction of paramagnetic ion nuclei through a phonon field. Fiz. tver. tela 4 no.11:3340-3342 N '62. (MIRA 15:12)

1. Kazanskiy gosudarstvennyy universitet imeni Ul'yanova-Lenina i Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR.
(Nuclear spin) (Paramagnetism)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

AUTHOR: Bashkirov, Sh. Sh.; Sadykov, E. K.

ORG: Kazan' State University (Kazanskiy gosudarstvennyy universitet)

TITLE: Effect of optical radiation on the electric quadrupole interaction of a paramagnetic-ion nucleus

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 6, 1966, 240-243

TOPIC TAGS: Mossbauer effect, Stark effect, quadrupole moment, paramagnetic ion, line shift, thulium, ytterbium, light radiation effect

ABSTRACT: To check on the idea of I. B. Bersuker and V. A. Kovarskiy (ZhETF Pis'ma v. 2, 286, 1965) that a Mossbauer line can be shifted with the aid of optical radiation, the authors have examined the effect of optical radiation on the electric quadrupole interaction between a paramagnetic-ion nucleus and its surrounding, which can produce an appreciable population of some band of upper levels of the ion in the crystal, thus changing the average electric field gradient (EFG) on the nucleus and consequently its quadrupole-interaction energy. The Mossbauer spectrum should then have, besides the main minima, additional minima corresponding to the ions in the upper energy states. The hypothesis was checked for the ions Tm^{3+}, Tm^{2+}, and Yb^{3+} placed in a crystalline field of cubic symmetry with superposition of a relatively weak component of stronger symmetry (tetragonal, trigonal, and rhombic). The calculations were made by the method of equivalent operators. In the case of the Tm^{3+} ion,

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using the parameters of the field in thulium ethyl sulfate, the result is negative, and the expected change in EFG under the influence of the radiation does not exceed several per cent at best. On the other hand, calculations lead to an appreciable effect for the Yb^{3+} and Tm^{2+} ions (ground state is $4f^{13}\ ^2F$). Under the influence of a cubic-symmetry field, the lower level $^2F_{7/2}$ split into a quadruplet and two doublets, while the level $^2F_{5/2}$ split into a quadruplet and a doublet. The intensity of the lower-symmetry field was varied over a wide range. The values of the EFG for the levels $^2F_{7/2}$ and $^2F_{5/2}$ in a field of tetragonal symmetry, calculated for two lower-symmetry field intensities as a function of the temperature, differ so much, that appearance of the effect can be expected even at relatively low population of the upper levels (not higher than 10%). At zero temperature, and also if the temperature changes appreciably, the EFG tends to zero, since the doublets of the cubic representation make no contribution. In many Yb^{3+} compounds the field components of lower symmetry are so intense that the EFG on the nucleus is determined principally by the contribution of the lower Kramers doublet, in which case the effect can be observed at low temperatures ($T \approx 4.2K$). Authors thank S. A. Al'tshuler for a discussion. Orig. art. has: 1 figure, 2 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 30Jan66/ ORIG REF: 001/ OTH REF: 005

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROV, V.

Sowing

Collective farm ready for the spring sowing. Photo-report by V. Bashkirov. Kolkh. proizv., 12, No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952, Uncl.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROV, V.

"Field quarters of I. Shatskiy's brigade"
MTS 12, no. 5, 1952

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROV, V.

Increase the regularity of flights relentlessly. Grazhd. av. no.3:2-3 Mr '61. (MIRA 14:3)

1. Zamestitel' nachal'nika Glavnogo upravleniya Grazhdanskogo vozdushnogo flota pri Sovete Ministrov SSSR.
(Aeronautics, Commerical)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

ARISTOV, Yuriy Kapitonovich; KRAKOVSKIY, I.I., prof., doktor tekhn.nauk, red.; AKSENOV, A.G., inzh., retsenzent; BASHKIROV, V.D., kand. tekhn.nauk, retsenzent; SHLENNIKOVA, Z.V., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Auxiliary marine mechanisms] Sudovye vspomogatel'nye mekhanizmy. Pod obshchei red. I.I.Krakovskogo. Moskva, Izd-vo "Rechnoi transport," 1959. 278 p. (MIRA 13:7)
(Marine engineering)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROV, Valentin Dmitriyevich, dots., kand. tekhn. nauk; PUKHOV, Pavel Petrovich, dots., kand. tekhn. nauk; VLASOV, A.A., inzh., retsenzent; BABURIN, B.B., inzh., retsenzent; VITASHKINA, S.A., red.

[Design of boats of the dredging and maintenance fleet] Ustroistvo sudov tekhnicheskogo flota. Moskva, Transport, 1964. 275 p. (MIRA 18:2)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROV, V.F., Geroy Sovetskogo Soyuza

Sheremet'yevo, airport... Kryl. rod. 16 no.2:16-17 F '65.
(MIRA 18:3)

1. Nachal'nik transportnogo upravleniya mezhdunarodynykh vozdushnykh liniy Ministerstva grazhdanskoy aviatsii SSSR.

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BASHKIROV, V.G.; VEYTS, B.I.; GEKHT, I.I.; ZAYTSEVA, R.I.

Neogenic formations in the fire zone of the Tekeli deposit.
Trudy Inst.geol.nauk AN Kazakh.SSR 7:156-192 '63.
(MIRA 17:9)

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NO REF SOV: 000 OTHER: 000

L 10555-66 [illegible]

ACC NR. AR5018643 SOURCE CODE: UR/0275/65/000/007/V009/V01[illegible]

SOURCE: Ref. zh. Elektronika i yeye primeneniye. Svodnyy tom, Abs. 7V73

AUTHOR: Agranat, B. A.; Bashkirov, V. I.; Kitaygorodskiy, Yu. I.

TITLE: Cavitation damage to metals and alloys in ultrasonic fields

CITED SOURCE: Sb. Primeneniye ul'trazvuka v mashinostr. Minsk, Nauka i tekhnika, 1964, 89-93

TOPIC TAGS: ultrasonics, metal test, corrosion resistance, metal surface, fabricated structural metal, ultrasonic field, ultrasonic effect, bronze, metal

TRANSLATION: Metals having higher cavitation and corrosion resistance were investigated as materials for building radiators and entrances in the ultrasonic

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L 10555-66
ACC NR: AR5018643

In the latter case, the process was much intensified due to a higher speed of closing the bubbles during the compression half-cycle, which resulted in speedy destruction of the metals. Corrosion resistance of 50 x 70 x 8 radiators soldered to a magnetostriction packet was tested in a 20% H_2SO_4, at 60C, with an ultrasonic application of 7 hours a day. The results were: Ta, 16 hours; Ti, 14 hours; Mo, 52 hours. The best results were obtained with the BrAZhMTs-10-3-1,5 bronze (150 hours); this bronze has been selected for producing industrial prototypes of converters having a uniform ultrasonic field and intended for etching work in metallurgical plants.

SUB CODE: 11, 20, 13

Card 2/2

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

increasing the wear resistance of [illegible]
units. Vest. mashinostr. 45 no.5:[illegible] [illegible]

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5

ZAKHARKIN, L.I., KORNEVA, V.V., KUNITSTSRAYA, G.M., BASHKIROVA, A.N., KAMZOLKIN, V.V., SOKOVA, K.M.

New manomer for the production of th syntheric fiber dode-Kalaktan.

Report to be submitted for the 12th Conference on high molecular weight compounds devoted to monomers, Baku, 3-7 April 62

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BC BA[illegible]KIROVA, A. [illegible]

Analysis of β-naphtholsulphonic acids. I. K. D. Schtschebatschev and A. J. Batchkirova (Anilinokras. Prom., 1934, 4, 114—120).—2 : 1-OH·$C_{10}H_6$·SO_3H and 2 : 1 : 6- and 2 : 1 : 7-OH·$C_{10}H_5(SO_3H)_2$ eliminate the 1-SO_3H on boiling for 1 hr. with 30% H_2SO_4, after which the solution is made alkaline with NaOH, acidified with AcOH, excess of $NaHCO_3$ is added, and β-$C_{10}H_7$·OH is titrated with 0·05N-p-NO_2·C_6H_4·N_2Cl (I). 2 : 8-OH·$C_{10}H_6$·SO_3H (II) is determined by titration of its solution in saturated aq. $NaHCO_3$ with (I), whilst 0·05N-m-NO_2·C_6H_4·N_2Cl is preferred for the determination of 2 : 6 : 8-OH·$C_{10}H_5(SO_3H)_2$ and 2 : 3 : 6 : 8-OH·$C_{10}H_4(SO_3H)_3$ (III). These acids may be separated by adding excess of EtOH to the solution of Na salts, when that of (III) is pptd., whilst from a corresponding solution of K salts only that of (II) remains in solution. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASCHKIROVA, A. J.

3C

I

Analysis of β-naphtholsulphonic acids. II. K. D. Schtscherbatschev and A. J. Baschkirova (Anilinokras. Prom., 1934, 4, 206—211; cf. B., 1934, 568).—Directions are given for analysis of the mixtures of sulphonic acids obtained in the sulphonation of β-$C_{10}H_7$·OH for production of crocein, R-, φ-, G-, and Schaeffer acids. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

ca

7

Analysis of viridone. R. D. Sherbachev and A. Ya. Bashkinova. *Za Rekonstruktsiyu Textil. Prom.* 14, No. 7, 42-4(1935); *Chimie & industrie* 35, 883.—Viridone, the bisulfite compd. of nitroso-β-naphthol, is suitably titrated iodometrically. Dissolve 0.025 g. of sample in 150-200 cc. distd. H_2O, dil. to 250 cc., to a 25-cc. aliquot in a 300-cc. flask add 150-200 cc. H_2O and 1 cc. of 1% starch soln., acidify with 5-10 cc. of 10% H_2SO_4 and titrate rapidly with 0.1 *N* I to a blue color (*A* cc.); dil. a 2nd 25-cc. aliquot of the original soln. with 150-200 cc. H_2O, add 15 g. $NaHCO_3$ and titrate as above (*B* cc.); percentage of viridone = $k(B - A) \times 2$, where *k* is the factor of the 0.1 *N* I. A. Pariseau-Couture

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1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

Ca

10

NO. 9-C

Benzothiazole derivatives. V. The 2-phenyl-4-bromo-5,6-benzobenzothiazole of Fries. I. I. Levkoev and A. Ya. Bashkirova (Kino-photo Inst., Moscow). *J. Gen. Chem.* (U.S.S.R.) 15, 832-5(1945). In an attempt to prep. 2-methyl-5,6-benzobenzothiazole (2-methylnaphtho[2,3]thiazole), the method of Fries and Buchler (C.A. 21, 2692) was used by which they obtained a compd. (I), m. 156°. They considered I to be 2-phenyl-4-bromo-5,6-benzobenzothiazole. A mixt. of 1,2-$BrC_{10}H_6NHAc$ and P_2S_5 was gradually added to boiling C_6H_6 and the mixt. refluxed 1 hr. Extn. with 5% NaOH gave 55.9% *2-thioacetamido-1-bromonaphthalene*, m. 140.7°, which was oxidized at 5° with alk. $K_3Fe(CN)_6$ to give a compd. (II), m. 101°. II did not form a picrate. II refluxed with HCl gave S, H_2S, and 1,2-$BrC_{10}H_6NH_2$. Hence II was not the expected compd., but *bis[1-(1-bromo-2-naphthylimino)-ethyl] disulfide*. Further study of I showed that while it was not affected by heating with H_2O or HCl, when it was heated with HCl-HOAc it split to S, H_2S, and 1,2-$BrC_{10}H_6NHH_2$ (III). Careful reduction of I with $SnCl_2$ gave *2-thiobenzamido-1-bromonaphthalene*, m. 150-3°. If the reduction is more vigorous, III is formed. Thus, I is actually *bis[(1-bromo-2-naphthylimino)phenylmethyl] disulfide*.

H. M. Leicester

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

LEVKOYEV, I.I.; BASHKIROVA, A.Ya.

Alkylation of 2-methylindole with esters of aromatic sulfonic acids. Zhur.prikl.khim. 35 no.3:683-689 Mr '62. (MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut.
(Indole) (Sulfonic acids)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, G.

After a serious illness. Nauka i zhizn' 28 no.8:84-85 Ag '61.
(MIRA 14:8)

(CONVALESCENCE)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, G.M.; PERSHINA, T.A.

Some data on observations of snowflake forms. Trudy GGO no.57:19-35 '56. (MIRA 10:1)

(Snow)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, G.M.

36-72-10/13

AUTHOR: Bashkirova, G.M. and Krasikov, P.N.

TITLE: Experiments in the Use of Crystallization Agents on Super-Cooled Fog (Opyty po izucheniyu nekotorykh veshchestv v kachestve reagentov kristallizatsii pereokhlazhdennogo tumana)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1957, Nr 72, pp. 118-126 (USSR)

ABSTRACT: The effectiveness of a number of reagents in activating crystallization in super-cooled fog was laboratory tested in a 250-liter cooling chamber, cooled to -25°, to -30°C, by means of ammonia expansion. Fog was created by introducing a stream of hot vapor for a period of 5-10 sec. Temperature was measured with mercury and resistance thermometers, placed at the bottom, center, and top of the chamber. The difference between the temperature in the center and at the bottom was approximately 3°C. The humidity content, which fluctuated between 0.5 to 2 g/m^3, was measured with a Zaytsev instrument. The appearance of crystals in the fog and the dissipation of fog was observed in a beam of light whose source was either an electric arc or a 300-500 watt electric lamp, placed outside the

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Experiments in the Use of Crystallization Agents on Super-Cooled Fog (Cont.) 36-72-10/13

chamber. The size of drops and crystals magnified 15 x 20 times was determined by microphotographing samples on a glass covered with a thin layer of a mixture of vaseline and transformer oil for drops, and a 10% solution of vinyl perchloride in dichloroethane for ice crystals. Drop size varied from 3μ-12μ in diameter, with a predominance 4 - 6 ; crystal size varied from 10μ - 300μ. The reagents in a dispersed state were introduced into the chamber by means of an electric arc, by burning alcohol solutions, through evaporation on a magnesium ribbon, etc. In some cases the substances tested were preliminarily sublimed in a glass bottle after which several cubic centimeters of sublimate (smoke) were introduced into the fog. The experiments showed that: 1) Silver iodide is the most effective of the available reagents; 2) Cadmium iodide is not very active at -10°-13°C. At lower temperatures such as -17 - 19°C its effectiveness increases; however, approximately the same effect is obtained in the formation of ice with more easily available substances such as ZnO, FeS and SiO_2. 3) Phloroglucine is active at -7 - 10°C. However, because it decomposes partially and burns when sublimed, its coefficient of usefulness is not very great and it may not be very effective. 4) Zinc oxide, ferrous sulfide and silica, dispersed at high temperatures, form crystallization nuclei, active at -13°C and lower. This is very important, because when found as admixtures in polluted air, they may affect the formation of the solid phase in clouds and fogs. 5) The various reagents used did not seem to affect the form of the ice crystals.

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36-72-10/13

Experiments in the Use of Crystallization Agents on Super-Cooled Fog (Cont.)

The following authors are mentioned: Bashkirova, G.M., Krasikov, P.N., Nikandrov, V. Ya., and Piotrovich, V.V. There are 7 figures, 7 tables, and 7 references, 1 of which is USSR.

AVAILABLE: Library of Congress

Card 3/3

Inst: Main Geophysical Observatory

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BASHKIROVA, G. M

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PHASE I BOOK EXPLOITATION SOV/3904
SOV/2-M-73

Glavnaya geofizicheskaya observatoriya

Fizika atmosfery (Physics of the Atmosphere) Leningrad, Gidrometeoizdat, 1958. 130 p. Errata slip inserted. 1,300 copies printed. (Series: Its: Trudy, vyp. 73)

Additional Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed.: V.V. Bazilevich, Doctor of Physics and Mathematics; Ed.: M.M. Yasnogorodskaya; Tech. Ed.: O.G. Vladimirov.

PURPOSE: This publication is intended for meteorologists and geophysicists.

COVERAGE: This issue of the Transactions of the Main Geophysical Observatory of the USSR contains 11 articles on problems in atmospheric physics, particularly in the region of the ground layer. Individual articles discuss: the meteorological conditions surrounding the formation of winter evaporational fogs, the possibilities of using radio-controlled aircraft models for

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aerological investigations, the effect of atmospheric turbulence on sound propagation, and the physical properties of fog droplets. References accompany each article.

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Physics of the Atmosphere SOV/3904

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Makhotkin, L.G., and V.A. Solov'yev. The Role of Electric Charges in the Coagulation of Fog Droplets 116

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JA/dwm/gmp
8-1-60

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, G.M.; KHIMACH, M.A.; SHVARTS, V.T.; SHISHKIN, N.S.

How to bring about winter precipitation by means of Italian hail-preventing rockets. Trudy GGO no.126:3-7 '62. (MIRA 15:7)
(Snow) (Weather control)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, G.M.; PERSHINA, T.A.

Mass and falling velocity c snowflakes. Trudy GGO no.156:83-100 '64. (MIRA 17:10)

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a rupture. However, in the case of rapid cooling of drops, the latter sometimes

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

ACC NR: AP6012942 SOURCE CODE: UR/0075/66/021/006/0682/0687

AUTHOR: Polyak, L. Ya.; Bashkirova, I. S.

ORG: none

36
B

TITLE: Titrimetric and photometric determination of molybdenum in niobium alloys by means of Complexon III

27 27

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 6, 1966, 682-687

TOPIC TAGS: molybdenum determination, molybdenum niobium alloy, titration, photometry, Complexon III

ABSTRACT: Two methods have been developed for determining large amounts of Mo(5—50%) in Mo-Nb alloys. The methods are based on the capacity of pentavalent Mo to form stable yellow compounds with Complexon III [Sodium salt of EDTA]. The titrimetric method involves addition of an excess of Complexon III to an Mo-Nb alloy solution and back titration of Complexon III in an acetate medium. The titrant is cupric sulfate; the indicator is 1-(2-pyridylazo)-2-naphthol. The second method is photometric determination of Mo in the form of its compound with Complexon III. Niobium and other components of niobium alloys are masked with tartaric acid and sodium fluoride. The two methods yield reproducible results. The procedures are described in the source. Orig. art. has: 2 figures and 1 table. [BO]

SUB CODE: 07/ SUBM DATE: 09Oct64/ ORIG REF: 002/ OTH REF: 004/ ATD PRESS: 5115

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

LYA., L.Ya.; [illegible]

Photometric determination of zirconium in magnesium and aluminum alloys using quercetin. Zhur. anal. khim. 19 no.7:842-846 '64. (MIRA 17:11)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

PUDOVIK, A.N.; SHCHELKINA, L.P.; BASHIROVA, L.A.

Substitution reaction of phosphoacetic ester and phosphoacetone. Zhur. ob. khim. 27 no.9:2367-2371 S '57. (MIRA 11:3)

1.Kazanskiy gosudarstvennyy universitet.
(Acetic acid) (Acetone)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

ACCESSION NR: AR4015654 S/0081/63/000/021/0096/0096

SOURCE: RZh. Khimiya, Abs. 21G76

AUTHOR: Kovalenko, P. N.; Bashkova, L. F.

TITLE: Electroanalytical determination of indium

CITED SOURCE: Sb. Elektrokhim. i optich. metody* analiza. Rostov-na-Donu, Rostovsk. un-t, 1963, 86-90

TOPIC TAGS: indium, indium electrodeposition, indium separation, electrolytic indium separation, indium determination

ABSTRACT: The rate of electrodeposition of In from a sulfuric acid solution and the possibility of electrolytic separation of In from Fe and Zn without the addition of organic acids were studied. It was established that 25 mg of In is deposited quantitatively on a copper-plated Pt cathode from a solution containing Na_2SO_4 over a period of 50 minutes at 60C (the potential of incipient In separation is -0.590 v relative to equilibrium saturation). To separate In from Fe and Zn, the electrolysis is carried out for 10 minutes at -0.62 v, then for 10 minutes at -0.65 v, then for 10 minutes at -0.700 and finally for 15-20 minutes at -0.75 v. The quantitative separation of 25 mg of In from 2.7 mg of Fe and Zn

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ACCESSION NR: AR4015654

was attained with 100-125 ml of electrolyte (pH 2.5) at 60C. The method was also employed to determine the presence of In in a hot-dip In bath. A test sample (2 ml) was diluted to a volume of 100-120 ml, the pH was adjusted to 2.5, and In was deposited as shown above (the electrolytic bridge is filled with sulfate solution, since Cl^- causes Fe to deposit at the anode). N. Chudinova

DATE ACQ: 09Dec63 SUB CODE: CH ENCL: 00

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

POPLAVSKAYA, A.V.; BASHKIROVA, L.I.

Obtaining Au spindle oil from Anastas'evka oil. Nefteper. i neftekhim. no.6:12-13 '64. (MIRA 17:9)

1. Groznenskiy neftepererabatyvayushchiy zavod.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

L 45721-66 EWT(m)/T WE

ACC NR: AP6026498 (A) SOURCE CODE: UR/0318/66/000/005/0007/0009

AUTHOR: Bondarenko, N. I.; Poplavskaya, A. V.; Bashkirova, L. I.; Lisitsina, N.

ORG: Groznyy Petroleum Refinery (Groznenskiy neftepererabatyvayushchiy zavod) 33

TITLE: Coke solar stock for producing gas-turbine fuels 13

SOURCE: Neftepererabotka i neftekhimiya, no. 5, 1966, 7-9

TOPIC TAGS: coke, solar oil, gas turbine fuel

ABSTRACT: Coke solar oil was obtained from the residue of thermal cracking of mazuts, and its potential as a source of gas-turbine fuel was investigated along the following lines: (1) separation from the coke solar oil of a fraction meeting the requirements of GOST 10433-63 for gas-turbine fuel; (2) expanding the resources of gas-turbine fuel by widening the boiling range, this being accomplished by introducing coke-solar oil fractions boiling above 410° and depressing the solification temperature by adding a depressor; (3) decreasing the content of high-melting components of the coke solar oil by their decomposition as a result of secondary distillation of the solar oil. It was found that a standard gas-turbine fuel could be obtained in the amount of ~48%. The addition of the depressor permitted an 81-85% expansion of the resources of the fuel. Gas-turbine fuel of standard quality can be obtained both by distilling coke solar oil and by direct separation in coking stills. Orig. art. has: 2 tables.

SUB CODE: 11/ SUBM DATE: none

Card 1/1 UCR UDC: 665.642.4-404.002.3:665.637.6

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

ROYTER, I.M.; BERZINA, N.I.; BASHIROVA, R.S.; REN'KAS, N.M.

Changes in the properties of liquid yeasts during their prolonged cultivation in the presence of sodium chloride. Trudy KTIPP no.21: 91-98 '59. (MIRA 14:1)

(Yeast)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

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Bashkirova, L S

Gidravlicheskiy raschet nizhnego b'yefa gidrotekhnicheskikh sooruzheniy (Hydraulic calculation of under water hydro-technical construction) Moskva, Gosenergoizdat, 1952
80 p. diagrs., tables.

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661.4
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APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, L. S.

USSR/Engineering - Hydraulics, Dams Nov 52

"Calculation of a Combined Stilling Pool," L. S. Bashkirova, Cand Tech Sci

Gidrotekh i Meliorats, No 11, pp 69-72

Defines combined stilling pool as energy-dissipating arrangement when excavation downstream from dam is combined with sill below pool. Develops graphical method for calcg dimensions of such device under condition to create hydraulic jump at downstream level with prescribed degree of submersion.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

Determination of

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, L.S.

112-1-412

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 1, p. 67 (USSR)

AUTHOR: Bashkirova, L. S.

TITLE: Tables for the Hydraulic Design of Channels (Tablitsy dlya gidravlicheskogo rascheta kanalov)

PERIODICAL: Tr. Kuybyshevsk. inzh.-stroit. in-ta, 1956, Nr 3, pp. 113-118

ABSTRACT: The author revised and made more concise . Prof. N. N. Agroskin's tables for the hydraulic design of channels (tables of normal depths and tables for the hydraulic design of channels by the method of abstract models). For this purpose, a transformation of the basic equation of the flow of water in a canal with a trapezoidal cross section was made, and computation relationships were deduced on whose basis the tables placed at the end of the work were compiled. These tables permit the determination of the water depth and the width of the channel bottom at any relationship between these data and at various channel slopes. An example of utilization of the tables is given.

Card 1/1 Yu. M.S.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

ROZENBERG, L.I.; BASHKIROVA, N.P.; TEMYANKO, S.L.

Work in training skilled personnel. Zdrav. Ros. Feder. 6 no.3:18-21 Mr '62. (MIRA 15:4)

1. Iz Gor'kovskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta Ministerstva zdravookhraneniya RSFSR (dir. - kand.med.nauk O.D.Kochura) i kafedry kozhno-venericheskikh bolezney (zav. - zasluzhennyy deyatel' nauki prof. M.P.Batunin) Gor'kovskogo meditsinskogo instituta imeni S.M.Kirova.
(PUBLIC HEALTH--STUDY AND TEACHING)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, N.T.

Essential inscriptions on mechanical drawings and directional specifications. Standartizatsiia 27 no.10:52 O '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

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SUBMITTED: 29Jul63 ENCL: 00 SUB CODE: OC, MT

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

KOMOVA, Z.A.; NASONOVA, A.S.; BASHKIROVA, Ye.T.

Use of polymyxin in the treatment of dysentery in adults.
Antibiotiki 9 no.9:855-856 S '64. (MIRA 19:1)

1. Klinicheskoye otdeleniye Gor'kovskogo instituta epidemiologii i mikrobiologii i infektsionnyye bol'nitsy No.2 i No.23 goroda Gor'kogo.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, V.

"Milk production on the collective farm."
Kolkh. proiz. 12, no. 6, 1952.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

TELEPNEVA, A.Ye.; AVERBUKH, T.D.; BLINOVA, N.P.; MATUSEVICH, V.S.; SHCHELKUNOVA, N.V.; BASHKIROVA, Ye.M.

Processing of waste thiosulfate liquors produced in the removal of hydrogen sulfide from gases. Koks i khim. no.12:40-44 '60. (MIRA 13:12)

1. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut (for Bashkirova).

(Sewage—Purification) (Sodium thiosulfate)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

APAKHOV, I.A.; KALYAZINA, V.S.; PARYLIS, E.Ya.; KLYUKINA, E.P.; POSTNIKOVA, A.V.; Prinimali uchastiye: BASHKIROVA, Ye.M.; NAZAROVA, A.K.; KOSTOUSOVA, A.S.

Improving the quality of contact sulfuric acid. Khim. prom. 41 no.10:745-746 O '65. (MIRA 18:11)

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APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, Ye.Ya.

Wood mites (Oribatidae) in the shelterbelt region of the northern part of the steppe zone. Zool.zhur. 32 no.6:1114-1125 N-D '53. (MLRA 6:12)

1. Kafedra zoologii Moskovskogo gosudarstvennogo pedagogicheskogo instituta im. V.I.Lenina. (Mites)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, Ye.Ya.

Oribatid mites from virgin steppe regions in the southeastern part of European Russia (with a description of new species) [with summary in English]. Zool. zhur. 37 no.2:193-209 F '58. (MIRA 11:3)

1. Kafedra zoologii Moskovskogo gosudarstvennogo pedagogicheskogo instituta im. V.I. Lenina.

(Russia, Southern--Mites)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

218 1 Bashkirtsev, A. A.

Traktornaya Brigada T. I. Shiryaeva. (Lushnikovskaya MTS). Novosibrsk, Kn. IZD., 1954. 44s. 20sm. (Peredovoi Opvit V Selvskom Khozyaystve). 2.000 EKZ. 60k.
(54-55814)p

631.37:629.114.2st(57.11)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIRTSEV, Aleksey Aleksandrovich; PESTRYAKOV, A.I., redaktor; ZUBRILINA, Z.P., tekhnicheskiy redaktor

[Combine operators in Western Siberia] Kombainery Zapadnoi Sibiri. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 24 p. (MLRA 9:10)
(Siberia, Western--Combines (Agricultural machinery))

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

ANDRYUSHCHENKO, Yu.S., BAGIN, Yu.I., BASHKIRTSEV, A.A., BELEN'KOV, G.Ye., BELINICHER, I.Sh., BUSHUYEV, N.M., VAGANOV, A.K., GASHEV, A.M., YES'KOV, K.A., ZGIRSKIY, Ch.I., IGNAT'YEV, M.I., KORUSHKIN, Ye.N., KUZ'MOV, N.T., PATSKEVICH, I.P., PICHAK, F.I., RAYTSES, V.B., RUDAKOV, A.S., SAPRYKIN, V.M., SIDOROV, F.F., UMINSKIY, Ye.A., KHANZHIN, P.K., CHEREMOVSKIY, Yu.I., BUSHUYEV, N.M., kand.tekhn. nauk, red.; DUGINA, N.A., tekhn.red.

[Manual for agricultural machinery operators] Pt. 3. Stationary internal combustion engines, steam engines and windmills. Rural electrification. Mechanization of production in animal husbandry. Spravochnik mekhanizatora sel'skogo khoziaistva. Pt. 3. Statsionarnye dvigateli vnutrennego sgoraniia, lokomobili i vetrodvigateli. Elektrifikatsia sel'skogo khoziaistva. Mekhanizatsiia proizvodstvennykh protsessov v zhivotnovodstve. Pod red. N.M. Bushueva. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit. lit-ry. 1957. 200 p. (MIRA 11:8)

(Agricultural machinery)

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ANDRYUSHCHENKO, Yu.S.; BAGIN, Yu.I.; BASHKIRTSEV, A.A.; BELEN'KOV, G.Ye.; BELINICHER, I.Sh.; BUSHUYEV, N.M.; VAGANOV, A.K.; GASHEV, A.M.; YEMS'KOV, K.A.; ZGIRSKIY, Ch.I.; IGANT'YEV, M.I.; KORUSHKIN, Ye.N.; KUZ'MOV, N.T.; PATSKEVICH, I.R.; PICHAK, F.I.; PAYTSES, V.B.; RUDAKOV, A.S.; SAPRYKIN, V.M.; SIDOROV, F.F.; UMINSKIY, Ye.A.; KHANZHIN, P.K.; CHERNOVSKIY, Yu.I.; YERAKHTIN, D.D., kand. tekhn. nauk, retsenzent; MAKAROV, M.P., inzh., retsenzent; TORBEYEV, Z.S., kand. tekhn. nauk, retsenzent; POLKANOV, I.P., kand. tekhn. nauk, retsenzent; IGNAT'YEV, M.G., agronom, retsenzent; GUTMAN, I.M., inzh., retsenzent; YERMAKOV, N.P., tekhn. red.; SARAFANNIKOVA, G.A., tekhn. red.

[Reference manual for the agricultural machine operator] Spravochnik mekhanizatora sel'skogo khoziaistva. Pt.2. [Repair of tractors and agricultural machinery] Remont traktorov i sel'skokhoziaistvennykh mashin. Pod red. N.M. Bushueva. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry. 1957. 335 p. (MIRA 11:9)
(Agricultural machinery—Maintenance and repair)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIRTSEV, A.A.

ANDRYUSHCHENKO, Yu.S.; BAGIN, Yu.I.; BASHKIRTSEV, A.A.; BELEN'KOV, G.Ye.; BELINICHER, I.Sh.; BUSHUYEV, N.M.; VAGANOV, A.K.; GASHEV, A.M.; YES'KOV, K.A.; ZGIRSKIY, Ch.I.; IGNAT'YEV, M.I.; KORUSHKIN, Ye.N.; KUZ'MOV, N.T.; PATSKEVICH, I.R.; PICHAK, F.I.; RAYTSES, V.B.; RUDAKOV, A.S.; SAPRYKIN, V.M., SIDOROV, F.F.; UMINSKIY, Ye.A.; KHANZHIN, P.K.; CHEREMOVSKIY, Yu.I.; YERAKHTIN, D.D., kand.tekhn.nauk; retsenzent; MAKAROV, M.P., inzh.,retsenzent; TORBEYEV, Z.S., kand. tekhn.nauk, retsenzent; POLKANOV, I.P., kand.tekhn.nauk, retsenzent; IGNAT'YEV, M.G., agronom, retsenzent; GUTMAN, I.M., inzhener, retsenzent; SARAFANNIKOVA, G.A., tekhn.red.; YERMAKOV, N.P., tekhn.red.

[Manual for agricultural mechanizers] Spravochnik mekhanizatora sel'skogo khoziaistva. Moskva, Gos.nzuchno-tekhn.izd-vo mashinostroit. lit-ry. Pt.1. [Tractors and automobiles, agricultural machinery and implements, and operation of machine and tractor yards] Traktory i avtomobili, sel'skokhoziaistvennye mashiny i orudiia, ekspluatatsiia mashinno-traktornogo parka. Pod. red.N.M.Bushueva. 1957. 462 p. (MIRA 10:12)

(Machine-tractor stations)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIRTSEV, M.I.; SALATINYAN, I.Z.

Experimental simultaneous separate exploitation of two high-temperature oil beds in one well. Nefteprom. delo no.6:11-14 '65. (MIRA 18:10)

1. Stavropol'skiy filial Groznenskogo neftyanogo nauchno-issledovatel'skogo instituta.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIROVA, Ye.Ya.

Nematodes parasitic in birds of the Maritime Territory. Trudy Gel'm. lab. 10:46-57 '60. (MIRA 13:7)
(Maritime Territory--Nematoda)
(Parasites--Birds)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIRTSEV, M.; CHESNOKOV, N.

Sympsoium on radiation protection and safety technique in the extraction and treatment of radioactive materials. Atom.energ. 16 no. 4:381-382 Ap '64. (MIRA 17:5)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

SALATINYAN, I.Z.; SHUBAYEV, A.M.; BASHKIRTSEV, M.I.

New reservoir disconnectors. Izv.vys.ucheb.zav.;neft' i gaz 7 no. 1:113 '64. (MIRA 17:7)

1. Pyatigorskiy filial Groznenskogo neftyanogo nauchno-issledovatel'skogo instituta.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

SALATINYAN, I.Z.; SHUBAYEV, A.M.; BASHKIRTSEV, M.I.

Separating beds with high temperatures. Neftaprom. delo no.4: 18-20 '64. (MIRA 17:6)

1. Stavropol'skiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIRTSEVA, A.A.

Use of DTA by determining iron in natural waters. A. A. Bashkirtseva

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIRTSEVA, A. A.

BASHKIRTSEVA, A. A. -- "Trylonometric (sic) Determination of Iron and Aluminum." Min Higher Education USSR, Ural Polytechnical Institute imeni S. M. Kirov, Sverdlovsk, 1956. (Dissertation for the Degree of Candidate of Chemical Sciences)

SO: Knizhnaya Letopis' No 44, October 1956, Moscow

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

BASHKIRTSEVA, A.A.

USSR /Chemical Technology. Chemical Products and Their Application I-14

Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31704

Author : Yakimets Ye. M., Bashkirtseva A.A.

Inst : Urals Polytechnic Institute

Title : Trilonometric Determination of Iron

Orig Pub: Tr. Ural'skogo politekhn. in-ta, 1956, No 57, 93-105

Abstract: Study of trilonometric determination of Fe^{3+} using the indicators tiron (I) and NH_4CNS (II). With I good results are obtained at pH 5.0-5.2 in the absence of Cu^{2+}, Zn^{2+}, Mn^{2+} and Al^{3+}. To obviate the detrimental effect of these, it is

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USSR /Chemical Technology. Chemical Products and Their Application I-14

Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31704

recommended to carry out the titration at pH 1.7-2.0 in the presence of II. Increase of temperature during titration increases velocity of the reaction, thereby promoting better defined results, but at the same time greater extent of hydrolysis lowers the sensitivity. The following temperature optimum is recommended: with concentrations of Fe^{3+} below 1 mg/liter, 55-60°, at higher concentrations 45-50°. Trilonometric titration permits determination of Fe^{3+} at concentrations of 0.05-250 mg/liter.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

SOV/137-57-10-20553

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 310 (USSR)

AUTHORS: Bashkirtseva, A. A., Yakimets, Ye. M.

TITLE: Trilonometric (Sodium Versenate) Method for the Determination of Aluminum and Iron in Various Products of Aluminum Plants (Trilonometricheskiy metod opredeleniya alyuminiya i zheleza v razlichnykh materialakh alyuminiyevykh zavodov)

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1957, Nr 58, pp 76-87

ABSTRACT: The authors have examined the conditions for the direct determination of Al and Fe in the products of Al plants with the aid of trilon B [sodium versenate] (I). For the determination of Al the authors recommend the method of back titrating of the excess of I in the presence of hematoxylene (II) as the indicator, the sensitivity to Al of which is $1.7 \cdot 10^{-7}$ g/cc. The excess of the standardized solution of I is added to 5 - 10 cc of the aluminate solution containing 25 - 100 mg Al_2O_3, the solution is heated to 70 - 80°C, 100 cc of hot water are added, the whole is neutralized to phenolphthalein, and 10 cc of the acetate buffer solution (pH 6.0) are added followed by 1 cc of 0.2% II. The excess of I is back titrated with a solution

Card 1/2

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

SOV/137-57-10-20553

Trilonometric (Sodium Versenate) Method for the Determination (cont.)

of Al salt to the change of the yellow-green color into violet. In bauxites and mud Al is determined by direct titration with I at pH 4.5 to the change of the violet color into yellow-green. Fe is determined at pH 1 - 2 in a test sample containing 0.01 - 100 mg Fe and 5 - 10 cc of free 1.0N HCl. NH_4SCN serves as indicator when the Fe content is < 1 mg, while at a Fe content of > 1 mg Na sulfosalycilate is used. Fe^{3+}, Fe^{2+}, Cu^{2+}, Zn^{2+}, F^- and others impede the determination of Al. Cu^{2+}, Zn^{2+}, Ni^{2+}, Co^{2+}, and Cr^{3+} impede the determination of Fe. Examples of determination of Al and Fe in Si, quartzite, cake, mud, and aluminate solutions and in the mother liquids are adduced. Bibliography: 18 references.

Z. G.

Card 2/2

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203820014-1

5(2)

AUTHORS: Bashkirtseva, A. A., Yakimets, Ye. M. SOV/32-25-5-3/56

TITLE: On the Trilonometric Iron Determination
(O trilonometricheskom opredelenii zheleza)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 5, pp 540-542 (USSR)

ABSTRACT: The deficiencies ascribed to the trilonometric iron determination are apparently to be explained by an incorrect choice of the pH, of temperature, of an insufficient indicator amount and an unclear determination range. The volumetric trilonometric iron determination in the presence of ammonium thiocyanate (I) and sulfosalicylic acid (II) had been already earlier investigated (Ref 2). This determination is possible with a content of from 0.1 to 100 mg Fe^{3+} in 100 ml sample, in which case (I) is used with 0.1 - 1 mg Fe^{3+} and (II) with 1 - 100 mg Fe^{3+}. The complex ions formed by Fe^{3+} with Trilon (T) are so stable that the iron determination may take place with low pH values, which are not sufficient for other cations to react with (T) (Table1)

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