

VAKHUTINSKIY, M.M.

Automatic densitometer for the milk of lime. Sakh.prom. 37
no.2:37(117)-39(119) F '63. (MIRA 16:5)

1. Kiyevskiy zavod "Sakhavtomat".
(Proportioning equipment) (Sugar manufacture)

SOV/124-58-5-6253

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 164 (USSR)

AUTHORS: Vakhvakhishvili, M.Z., Radin, A.N.

TITLE: Investigation of the Long-term Performance of Wire-type Resistance Strain Gages (Issledovaniye dlitel'noy raboty provolochnykh datchikov soprotivleniya)

PERIODICAL: V sb.: Issledovaniya. Stal'nyye konstruksii. Moscow, Gos. izd-vo lit. po str-vu i arkhitekt., 1957, pp 144-156

ABSTRACT: Recommendations are given concerning the care of wire gages for experiments of from 4-6 months duration.
Reviewer's name not given

1. Strain gages--Performance

Card 1/1

USCOMM-DC-55914

Vakhvakhishvili, K.

PROF. YAKOV, M., doktor tekhnicheskikh nauk; VAKHVAKHISHVILI, kandidat tekhnicheskikh nauk.

Field method of determining the strength of building materials.
Stroi.mat., izdel.i konstr. 1 no.6:29-30 Je '55. (MLRA 9:1)
(Concrete--Testing)

BARABADZE, I.I.; BAKRADZE, G.S.; BERIDZE, G.I.; VAKHVAKHISHVILI, N.I.;
GABUNIYA, G.A.; GABUNIYA, Sh.V.; GANGIYA, A.A.; GOGOBERIDZE, Ya.A.;
DZIMISTARISHVILI, A.I. [deceased]; ZNAMENSKIY, K.P.; KVANTALIANI,
N.A.; NIKOLAYSHVILI, V.S.; TOPADZE, L.I.; KHUNTSARIYA, A.G.; YAKO-
BASHVILI, N.Z.; DZHOMARDZHIDZE, G.S., red.; ROYNISHVILI, N.I., red.;
PRITYKINA, L.A., red.; KISINA, Ye.I., tekhn. red.

[Food industry of the Georgian S.S.R. during the last 40 years]
Pishchevaia promyshlennost' Gruzinskoi SSR za 40 let. Moskva,
Pishchepromizdat, 1961. 162 p. (MIRA 14:9)
(Georgia--Food industry)

VAKHVAKHOV, G. G.

Vakhvakhov, G. G. — "Investigation of Axial Guide Apparatus for the Operating Regulation of the Output of Centrifugal Ventilators and the Selection of Optimal Designs for These Devices." Moscow Inst of Engineers of City Construction of the Moscow City Executive Committee, Moscow, 1955 (Dissertation for Degree of Candidate of Technical Sciences).

SO: Knizhnaya Letepis', No. 23, Moscow, June, 1955, pp. 87-104.

VAKHVAKHOV, G.G., inzhener.

Type TsP7-40 (VPV) dust ventilators. Rats i izobr.predl. v stroi.
no.122:16-20 '55. (MIRA 9:7)
(Dust--Removal) (Fans, Mechanical)

VAKHVAKHOV, G.G., SHEPELEV, I.A.

Possibility of increasing the output of ventilators by plants
in operation. Vod. 1 san.tekh. no.1:31-35 Ja '59.

(MIRA 12:1)

(Fans, Mechanical)

VAKHVAKHOV, G.G., kand.tekhn.nauk

Designing blades for twisting air flow. Sbor.trud.MIIST no.2:
98-115 '59. (MIRA 13:4)
(Fans, Electric)

ADAMOVICH, P.V.; BATURIN, V.V.; VAKHVAKHOV, G.G.; VAYNGAUZ, L.G.;
VILENSKIY, Ye.Ya.; GAMBURG, P.Yu.; DAVYDOV, Yu.S.; KARPIS,
Ye.Ye.; KUZNETSOVA, Z.I.; KOP'YEV, S.F.; LIVCHAK, I.F.;
LOBACHEV, P.V.; LEV, G.M.; NOTKIN, Ye.M.; PIRUMOV, A. I.;
POLIKARPOV, V.F.; PROTOPOPOV, A.P.; REPIN, N.N.; SLADKOV,
S.P.; TALIYEV, V.N.; TROITSKAYA, F.B.; FEDOROV, M.N.;
SHEVELEV, F.A.; SHKABEL'NIKOVA, L.P.; SHCHUTSKIY, A.I.;
SMIRNOV, L.I., inzh., nauchnyy red.; SMIRNOVA, A.P., red.
izd-va; MOCHALINA, Z.S., tekhn. red.; RODINOVA, V.R., tekhn.
red.

[Present level and prospects for the development of sanitary
engineering and the production of sanitary engineering equip-
ment] Sovremenniy uroven' i perspektivy razvitiia sanitarnoi
tekhniki i proizvodstva sanitarno-tekhnicheskogo oborudova-
niia. Moskva, Gosstroizdat, 1962. 283 p. (MIRA 15:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut
sanitarnoy tekhniki.

(SANITARY ENGINEERING)

LENCHEVSKIY, Yu.S., inzh.; ~~VAKHVAKHOV, G.G.~~, kand. tekhn. nauk,
nauchn. red.

[Ventilation units with the fan speed controlled by a
variable-speed belt drive] Ventagregaty s reguliruemoi
skorost'iu vrashchenia ventilatora pri pomoshchi remen-
nogo variatora; informatsionno-izdatel'skii sektor. Mo-
skva, Akad.stroit. i arkhitekt. SSSR. Nauchno-issl. in-t
sanitarnoi tekhniki, 1962. 12 p. (MIRA 16:9)
(Fans, Mechanical)

POLYAK, Boris Grigor'yevich; YAKIK, Yevgeniy Aleksandrovich;
OVCHINNIKOVA, Yekaterina Nikolayevna; AVER'YEV, V.V.,
kand. geol.-miner. nauk, otv. red.

[Hydrogeothermal conditions in the volcanic area of Kamchatka
(the city of Petropavlovsk)] Gidroteotermicheskie usloviia
vulkanicheskogo raiona Kamchatki (g. Petropavlovsk). Moskva,
Nauka, 1965. 93 p. (MIRA 18:9)

U.S.S.R. / Human and Animal Physiology. Blood. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22089.

Author : Geller D. S., Vakiman, L. F.

Inst : Not given.

Title : "Fixed" Rh Antibodies in the Method of Their Investigation.

Orig Pub: Labor. delo, 1956, No 4, 14-18.

Abstract: Different types of Rh antibodies are described; the mechanism of their action is considered; a method of determination of "fixed" or monovalent Rh antibodies is introduced. The preparation of antiglobulin serum and its application in clinical demonstration of Rh sensitization is discussed (Coombs test, modified by Umhova).

Card 1/1

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VAKIN, A.T.
Am

PROCESSES AND PROPERTIES INDEX

VAKIN (A. T.) K. nonpay o n p d u x i n e r i n u p e r e n a c t i v e n a i t o r u n h
 of summer-felled logs from fungal injury.] - ex *Phoma nosporeo-*
nus opressana, *Ciropax pabum*, *Abotipimopim*, *Xpauenus*, *Asococcus*
 (H.H.H.M.O.), I [Injuries to timber caused by fungi. Collections of
 of the Works of the Laboratory for Timber Storage of ZNIMOD, I],
 pp. 10-92, 13 figs., Goyt, Alermo Texu, Wajit. [State Forestal
 Tech. Publ. Office], Moscow, 1931.

This is a detailed account of large-scale experiments in 1931 in the
 neighbourhood of Moscow to determine the conditions that are least
 conducive to the development of blue staining and other lignicolous
 moulds, and of fungal rots, in summer-felled pine and fir logs stored
in situ. Comprehensive notes are given on the more important fungi
 that were observed locally to cause blemishes and decay in the logs, the
 symptoms produced being briefly described. These are superficial blue
 staining caused by *Cladophorium herbarum* and *Alternaria lupinola* on
 both hosts; deep penetrating blue stains in both pine and fir caused by
Centostomella piceae, *C. pini*, *C. corrala*, *C. imperfecta* n.sp. [see next
 abstract], and *Hormonema dematioides* [R.L.M., xiv, p. 68], and in pine
 alone by *Endocauliophora corulescens* [loc. cit.]; a reddish-brown
 (cacao-coloured) slow rot caused very commonly in fir but more rarely
 in pine by *Stereum sangpaucentum*; and a coffee-coloured one, more
 especially in pine, caused by a mycelium which has not yet been identi-

COMMON ELEMENTS
 OPEN
 MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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had. Among the other fungi isolated special mention is made of a deep-seated, yellowish-pink or light orange discoloration in streaks, associated with fruiting bodies of *Corticium* *lex*, light brown or whitish, frequently water-soaked discolorations caused by *Penicillium giganteum* [ibid., VII, p. 3], and a very slow, dirty grey, wet rot caused by *Schizophyllum commune*. A passing mention is finally made of very superficial yellow, delicate pink, cherry coloured, and purple discolorations caused by moulds such as *Aspergillus* and *Penicillium* spp., which, however, did not affect the properties of the timber and usually disappeared entirely as the wood dried.

While it is freely admitted that experiments during one season alone are not conclusive, the results of the main investigations indicated that effective protection against infection with these fungi, and also against too rapid desiccation leading to the formation of cracks in the timber and from attacks by bark-boring insects, was afforded by piling the unbarked pine and fir logs on low supports or directly on damp earth not later than 15 days after felling, into compact piles of 20 to 30 logs or more, and covering them with a thick layer of conifer branches; this should be supplemented by painting the cut ends of the logs with either 3 per cent. sodium fluoride or a 3 to 5 per cent. iron sulphate solution. Fir logs showed also little injury when they were stripped of the outer bark down to the bast, which should be left as uninjured as possible, and stored in loose piles, each row of logs being separated from the next by transverse supports.

VAKIN, A. T.

VAKIN, A. T., and OGANOVA, E. A. "The Question of Natural Deterioration of Cut Wood of Oaks in Forests," in Reports of the Scientific-Research Work for 1945, Department of Biological Science, Publishing House of the Academy of Science, USSR, Moscow, 1947, pp. 105, 511 Ak114.

SO: SIPA, SI 90-53, 15 December 1953

7 of 14

VAKIN (A. T.) & ШИРАККИ (S. A.). О некоторых трутовиках на Кавказской
Пихте (*Abies nordmanniana* Link). [Some bracket fungi on Caucasian Fir
(*Abies nordmanniana* Link).] *C. R. Acad. Sci. U.R.S.S., N.S.*, 73, 1, pp.
203-206, 3 figs., 1950.

During their work in 1947 and 1948 in the Teberdin and Caucasus State Forest
Preserves and in the forests in the Stavropol and Krasnodar districts, the authors
studied the bracket fungi occurring on Caucasian fir (*Abies nordmanniana*) in
mature and old stands. The most common species were *Fomes robustus* (R.L.M.,
15, p. 68), which is destroying the wood of trees 200 years old or over; *Polyporus*
berkeleyi (ibid., 11, p. 690) at high altitudes, causing a root rot; and *P. dryadens*
(ibid., 9, p. 749; 11, p. 690), causing a rot of the roots and the lower trunk.

VAKIN, A. T.

VAKIN, A. T., and GUSEVA, A. N. "On Some Conditions for the Development of the Fungus, *Polyporus Dryophilus* Berk, in the Trunk of *Quercus*," Doklady Akademi Nauk SSSR, vol. 71, Apr. 21, 1950, pp. 11155-1153. 511 P444A

30: SIRA, SI 90-53, 15 December 1953

VAKIN, A. T.

VAKIN, A. T., and SHTRAUKH, S. A. "Some Agarics on Nordmann Fir (*Abies nordmanniana* Link)," Doklady Akademii Nauk SSSR, vol. 73, July 1, 1950, pp. 203-206. 511 F444A

SO: SIRA, SI 90-53, 15 December 1953

VAKIN, A. T., CHERNTOV, I. A., AKINDINOV, M. V.

Lumber

Technical properties of western Ukrainian beech lumber. Les. prom. 12 no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED.

A. VAKIN

"Technical properties of the wood of the West Ukrainian beech tree." p. 19.
(POLANA, Vol. 9, no. 1, Jan. 1953, Praha, Czechoslovakia.)

SO: Monthly List of East European Accessions, L.C., Vol. 2 No. 7, July 1953, Uncl.

SHIPEROVICH, V.Ya.; VAKIN, A.T., redaktor; KARASIK, N.P., tekhnicheskii redaktor.

[Prevention of secondary defects of coniferous lumber] Zashchita ot vtorichnykh porokov lesomaterialov khvoinykh porod. Moskva, Goslesbumizdat, 1954. 34 p. (MLRA 7:11)
(Wood--Preservation)

VAKIN, A. T.

USSR/Plant Diseases. Diseases of Forest Plants.

Q-2

Abs Jour : Ref Zhur-Biol., No 8, 1958, 34923

Author : ~~Vakin A. T.~~

Inst : Leningrad Forestry Technical Academy

Title : The Role and Tasks of Phytopathology in Contemporary Conditions of Forestry in the USSR. (Rol' i zadachi fitopatologii v sovremennykh usloviyakh lesnovo Khozyaystva SSSR)

Orig Pub : Tr. Leningr. lesotekhn. akad., 1957, No81, ch. 3, 47-54

Abstract : No abstract

Card 1/1

VAKIN, A.T., prof.; GOLOVIN, P.N., prof., doktor biolog.nauk; DOBROZRKOVA, T.L., dotsent; ZHURAVLEV, I.I., doktor sel'skokhoz.nauk; POLYAKOV, I.M.; SOKOLOV, D.V., dotsent; STEPANOV, K.M., doktor biolog.nauk; TUPENEVICH, S.M., prof.; FEDORINCHIK, N.S., kand.sel'skhokhoz.nauk; FEDOTOVA, T.I., doktor sel'skokhoz.nauk; KHOKHRYAKOV, M.K., doktor biolog.nauk; CHIGAREV, G.A., kand.sel'skokhoz.nauk; YATSENKO, I.P., prof. [deceased]; REUTSKAYA, O.Ye., red.; CHUNAYEVA, Z.V., tekhn.red.

[A phytopathologist's dictionary - reference book] Slovar'-spravochnik fitopatologa. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 414 p.
(MIRA 13:1)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Polyakov).
(Plant diseases--Dictionaries)
(Russian language--Dictionaries)

MEYER, K.I.; VAKIN, A.T.

On the 80th birthday of Viktor Vsevolodovich Miller. Bot. zhur. 46
no.6:915-919. Je '61. (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Miller, Viktor Vsevolodovich, 1880-)

VAKIN, Aleksandr Timofeyevich

Rot caused by tree trunk injury and conditions of its development.
Drevarsky vyskum no.4:281-292 '62.

1. Kafedra drevesinovedeniya i fitopatologii, Leningradskaya
lesotekhnicheskaya akademiya im. S.M. Kirova, Leningrad.

VAKIN, Aleksandr Timofeyevich, prof.; YATSENKO-KHMELEVSKIY, A.A.,
red.

[Storage of round lumber] Khranenie kruglogo lesa. Moskva,
Izd-vo "Lesnaia promyshlennost'," 1964. 427 p.
(MIRA 17:5)

VAKIN, A.T.

Development of forest phytopathology in the U.S.S.R.
Trudy VIZR no.23:87-95 '64. (MIRA 19:2)

VAKIN, S.A.

USSR/Electronics - Slot Antennas

1 May 52

"Propagation of Electromagnetic Waves Along an Infinite
Spiral Slot", S. A. Vakin

"Dok Ak Nauk SSSR" Vol LXXXIV, No 1, pp 37-41

Considers the conditions under which electromagnetic waves can be propagated along an infinite cylinder of circular cross section with ideally conducting walls of infinitely small thickness. The cylinder is placed in a homogeneous isotropic medium without losses and has a narrow slot of fixed width cut in a spiral along its walls. Prof Ya. N. Fel'd was responsible for scientific direction of the work. Submitted by Acad M. A. Leontovich 1 Mar 52.

224T62

AUTHORS: Vakin, S.A., Member of the Association SOV/108-13-7-11/14
Poletayev, I.F.

TITLE: On the Measuring of Complex Resistances by Means of a Feeder-Reflectometer (Ob izmerenii kompleksnykh soprotivleniy s pomoshch'yu fidernogo reflektomtra)

PERIODICAL: Radiotekhnika, 1958, Vol. 13, Nr 7, pp. 76-79 (USSR)

ABSTRACT: A method of measuring complex resistances is investigated, which is based upon the use of the feeder-reflectometer developed by A.A.Pistol'kors and M.S.Neyman, and modernized by B.G.Strausov. The analysis of the reflection of electromagnetic waves of heterogeneities in the line, which was carried out by the authors, showed that, with the aid of a reflectometer, it is possible to carry out measurements not only of the modulus but also of the phase of the reflection factor. Phase-measurement is based upon a certain dependence of the reflection factor on the investigated load P_Z , the reflection factor of the investigated load P_{ZR} shunted by the resistance R , and the reflection factor P_R of the gauged resistance shunted by the wave resistance of the line under investigation. The connection existing between these factors can be determined by the method of analyzing heterogeneities in

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On the Measuring of Complex Resistances by Means
of a Feeder-Reflectometer

SOV/ 108-13-7-11/14

the lines. The determination of resistances is carried out on the basis of two measurements of the modulus of the reflection factor. The equation (17) is derived which makes it possible to determine the phase of the reflection factor ψ with an accuracy of up to 180° . The absolute error in measurements of the phase of the reflection factor in the case of the method dealt with here depends on the measuring errors of the reflectometer; as shown by experiments, this absolute error does not exceed $\pm (5 \div 7)\%$ at $P_2 > 0.5$. For the determination of the effective- and blind component of the complex resistance according to known P_2 and ψ circular diagrams of the resistances (nomographs by Volpert) are used. The method described can be widely used for the purpose of measuring input resistances of antennae, receiving sets, filters, and other four-pole circuits of the shortwave range. There are 2 figures, and 3 references which are Soviet.

SUBMITTED: November 24, 1956 (initially) and November 4, 1957 (after revision)

ASSOCIATION: Vsesoyuznoye nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (All-Union Scientific-technical Association for Radio Engineering and Electrical Communications im. A.S. Popov)

Card 2/2

1. Electric currents--Resistance 2. Reflectometers
--Applications 3. Electromagnetic waves--Measurement

PALIY, Aleksandr Ignat'yevich; VAKIN, S.A., red.; CHAPAYEVA,
R.I., tekhn. red.

[Radio warfare] Radiovoina. Moskva, Voenizdat, 1963.
204 p. (MIRA 16:10)
(Radio, Military) (Radar, Military)

VAKIN, S.A.; KRIVITSKIY, B.Kh.; SHUSTOV, L.N.

Direction finding characteristics of single-pulse automatic tracking systems. Izv.vys.ucheb.zav.: radiotekh. 8 no.5:550-560 S-O '65. (MIRA 18:12)

1. Submitted November 25, 1964.

L 39578-66 EWT(1) WR/GD

ACC NR: AP6000520

SOURCE CODE: UR/0142/65/008/005/0550/0560

AUTHOR: Vakin, S. A.; Krivitskiy, B. Kh.; Shustov, L. N.

ORG: none

TITLE: Direction-finding characteristics of monopulse automatic-tracking systems

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 5, 1965, 550-560

TOPIC TAGS: monopulse radar, automatic tracking

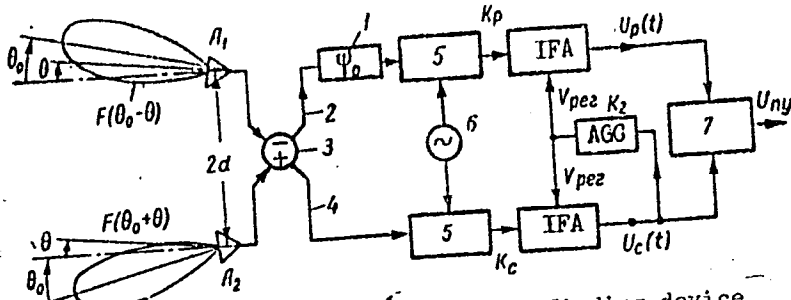
ABSTRACT: The well-known Hellgren's direction-finding characteristics are based on ideal operation of the AGC system. Under real conditions, the phase-detector output voltage depends on the strength of the input signal. The present article develops formulas describing the direction-finding characteristics with an allowance for the real AGC-system operation. A generalized scheme (see figure below) is considered: Both amplitude and phase direction-finding characteristics show that the major-lobe width is independent of the AGC equivalent transfer factor ρ . This factor, however, has an essential influence on the slope of the direction-finding characteristics and on the spacing between the maxima when $\rho < 10-20$. With

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B

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UDC: 621.396.96

L 39578-66
ACC NR: AP6000520



Functional diagram of the direction-finding device of a monopulse radar. 1 - delay system, 2 - difference, 3 - hybrid ring, 4 - sum, 5 - mixer, 6 - heterodyne, 7 - phase detector; IFA - IF amplifier, AGC - automatic gain control

$m > 20-30$, the shape of the direction-finding characteristic depends only slightly on the input-signal amplitude and AGC parameters. The direction-finding system is linear (with a variable slope) only for small angular displacements of the target from the equisignal line. Orig. art. has: 11 figures and 40 formulas.

SUB CODE: 17 / SUBM DATE: 24Oct63 / ORIG REF: 003

Card 2/2 H 5

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858410018-5



APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858410018-5"

GAL'TSOVA, R.D.; NOVICHKOVA, A.T.; VAKINA, I.P.

Effect of glucose on ergosterol synthesis by yeasts. *Mikrobiologiya*
28 no.4:502-506 J1-Ag '59. (MIRA 12:12)

1. Institut mikrobiologii AN SSSR.
(VITAMIN D metab.)
(GLUCOSE pharmacol.)
(YEASTS metab.)

40612

27.1220

S/220/62/031/004/001/001

1021/1215

AUTHORS: Gal'tsova, R. D. and Vakina, I. P.

TITLE: Effect of X-ray irradiation upon the content of glycogen and reducing compounds in yeasts

PERIODICAL: Mikrobiologiya v. 31, no. 4, 1962, 577-581

TEXT: This is a continuation of previous studies. Carbohydrate metabolism in irradiated yeasts was insufficiently studied until now. *Sacch cerevisiae*, *Sacch. Froberg carlsbergensis* and *Sacch. carlsbergensis* 10-D. were x-irradiated with 10-200 cu at a dose rate of 800 r/min in pressed and sterile conditions, and grown on agar for 24, 48, 72 and 96 hours. Non-irradiated cells were grown under similar conditions. A very large inoculum was used. The glycogen content in the irradiated cells decreased (from 60 to 90%) in all three strains. Immediately after irradiation the glycogen content decreased only to 5-8%. An average increase of 30-35% in the content of reducing compounds was observed in the irradiated and grown yeast cells. This increase was found also in cells immediately after irradiation with 20-25 cu. Irradiation with 200 cu, resulted in an increase in reducing compounds by about 50% as compared with the controls. There are 2 figures and 3 tables.

ASSOCIATION: Institut Mikrobiologii AN SSSR (Institute of Microbiology of the AS USSR)

SUBMITTED: September 25, 1961

Card 1/1

GAL'TSOVA, R.D.; VAKINA, I.P.

Effect of X-ray irradiation on the content of glycogen and
reducing substances in yeast organisms. Mikrobiologiya 31
no.4:577-581 J1-Ag '62. (MIRA 18:3)

1. Institut mikrobiologii AN SSSR.

GAL'TSOVA, R.D.; VAKINA, I.P.

Factors determining sterol biosynthesis in yeast organisms.
Mikrobiologiya 33 no.3:390-396 My-Je '64.

(MIHA 18:12)

1. Institut mikrobiologii AN SSSR. Submitted April 5, 1963.

VAKINA, V.V., inzh.

Outflow of viscous fluids through throttle plates at
high pressure changes. Vest.mashinostr. 45 no.8:38-40
Ag '65. (MIRA 18:12)

VAKINA, V.V., inzh.

Investigating throttle-disk blocks. Gidr. mash. i gidr. no.1:
86-93 '65. (MIRA 18:12)

1. Kiyevskiy avtodorozhnyy institut.

MINACHEV, Kh.M.; VAKK, E.G.; DMITRIYEV, R.V.

Isotopic exchange of hydrogen in hydrocarbons on rare earth oxides.
Report No.1: Deuterium exchange reaction on neodymium oxide between
cyclohexane and deuterium. Izv.AN SSSR.Otd.khim.nauk no.6:1086-
1093 '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Deuterium) (Cyclohexane) (Neodymium oxide)

MINACHEV, Kh.M.; VAKK, E.G.; DMITRIYEV, R.V.; NASEDKIN, Ye.A.

Isotopic exchange of hydrogen in hydrocarbons on rare-earth oxides.
Report No.2: Deuterium exchange in cyclohexane on neodymium,
gadolinium, aluminum oxides, cerium dioxide, and neodymium
oxide on aluminum oxide. Izv. AN SSSR. Ser.khim. no.3:421-426
Mr '64. (MIRA 17:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

MINACHEV, Kh.M.; VAKK, E.G.; DMITRIYEV, R.V.; NASEDKIN, Ye.A.; FEDYUNIN, Yu.A.

Isotopic exchange of hydrogen in hydrocarbons on rare-earth oxides.
Report No.3: Deuterium exchange in hydrocarbons on gadolinium oxide.
Izv. AN SSSR. Ser. khim. no.4:618-625 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

ACC NR: AT6022237

SOURCE CODE: UR/0000/66/000/000/0020/0033

AUTHOR: Vinokurov, V. I.; Vakker, R. A.

ORG: none

TITLE: Using nonlinear elements in correlators

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya radiotekhniki. Doklady. Moscow, 1966, 20-33

TOPIC TAGS: signal correlation, correlation statistics, nonlinear effect

ABSTRACT: The properties of a correlator based on a nonlinear element (detector) whose characteristic is described by the equation:

$$z = \begin{cases} ay, & y \geq 0, \\ 0 & y < 0. \end{cases}$$

are investigated. The S/N ratio at the output of this correlator is analyzed as a function of: reference signal whose amplitude is fairly large in comparison with the signals which follow, a signal whose relationship to the reference signal is non-stationary, and the external noise which is uncorrelated with the other two signals. The analysis assumes that the processes are confined to a narrow frequency band, are Gaussian with average value of zero, and have symmetrical spectra. The S/N of this correlator detector is compared to that of the ideal correlator. A loss coefficient

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ACC NR: AT6022237

is introduced which relates the S/N of the detectors with and without noise due to detection process for the cases when the input signal has a rectangular spectrum, when it is similar to that of a simple ringing circuit, and when it is similar to a band-pass filter spectrum. Orig. art. has: 27 formulas and 6 tables.

SUB CODE: .09/ SUBM DATE: 16Mar66/ ORIG REF: 001/ OTH REF: 002

Card 2/2

VAKKER, V.G.

Simultaneous epidermic vaccination against brucellosis and tularemia. Zdrav.Kazakh. 17 no.7:19-21 '57. (MIRA 12:6)

1. Iz Pavlodarskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.

(BRUCELLOSIS) (TULAREMIA)

VAKLAHOVSKY, Karl (Hainichen, Nemet Demokratikus Koztarsasag)

Embossing and embossing plates in the leather industry. Bor
cipo 11 no.5:141-144 S '61.

ARYKIN, I.G.; SHCHAPOV, A.A.; YEGOROVA, Ye.M., red.; VAKLASHOVA,
R.A., red.

[Regulation of the estuaries of lumber-floating rivers]
Regulirovanie ust'evykh uchastkov lesosplavnykh rek. Mo-
skva, TSentr. nauchno-issl. in-t informatsii i tekhniko-
ekon. issledovaniy po lesnoi, tselliulozno-bumazhnoi,
derevoobrabatyvaiushchei promyshl. i lesnomu khoziaistvu,
1963. 21 p.
(MIRA 17:5)

VAKLINOVA, S.

Effect of additional artifucial fertilization on sunflowers. p. 20.

Vol. 10, no. 6, June 1955
KOOPERATIVNO ZEMEDELIE
Sofiya, Bulgaria

S₀: Eastern European Accession Vol. 5 No. 1 Jan. 1956

VAKLINOVA, S.

"Treatment of seeds before sowing as a measure for attaining higher yields and for guarding against drought" (p. 31)

"Luch Vostoka, a collective farm for any types of agriculture" (p. 32)

"Tea plantations in Georgia" (p. 33)

"In a Chinese village" (p. 35)

KOOPERATIVNO ZEMEDELIE

(Ministerstvo na zemedeliето) Sofiya Vol 8 No 8 1953

SO: East European Accessions List Vol 2 No 7 Aug 1954

L 30179-66 SCTB DD

ACC NR: AP6020313

SOURCE CODE: BU/0011/65/018/007/0659/0662

AUTHOR: Vaklinova, S.; Tomova, N.; Nikolova, E.; Secenska, M.ORG: Section of Biochemistry, Institute of Plant Physiology, BAN.

TITLE: Effect of certain factors on the photooxidation of hydroxylamine in isolated chloroplasts

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 7, 1965, 659-662

TOPIC TAGS: chloroplast, hydroxylamine, photooxidation, enzyme, plant chemistry, chlorophyll

ABSTRACT: The authors established earlier that in isolated chloroplasts there occur processes of photooxidation of hydroxylamine to nitrile (Compt. rend. Acad. bulg. Sci., 17, 1964, no. 3, 283) accompanied by absorption of molecular oxygen (Ibid., 17, 1964, no. 11, 1051). Hydroxylamine seemed to be the donor of electrons in a reaction catalyzed by light, and the final acceptor was the molecular oxygen. The present paper deals with the changes in the oxidation rate of hydroxylamine due to the substrate of the reaction (NH₂OH), the chlorophyll concentration, the pH of the chloroplast suspension, and the temperature. All results seem to indicate that the photooxidation of hydroxylamine is a light-induced enzyme process. This paper was presented by Academician Emanuiloff on 20 March 1965. Orig. art. has: 5 figures. [Orig. art. in Eng.]

[JPRS]

SUB CODE: 06 / SUBM DATE: 20Mar65 / ORIG REF: 002 / OTH REF: 001

Card 1/1 9.2

L 30182-66 SCTB DD

ACC NR: AP6020316

SOURCE CODE: BU/0011/65/01B/007/0671/0674

AUTHOR: Vaklinova, S.; Tomova, N.

15
B

ORG: Section of Biochemistry, Institute of Plant Physiology, BAN

TITLE: Influence of temperature on the reduction of nitrite in higher plants in light and in darkness

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 7, 1965, 671-674

TOPIC TAGS: nitrite, plant chemistry, chlorophyll, low temperature effect, enzyme, photosynthesis

ABSTRACT: It is currently believed that the photoreduction of nitrite is an enzymatic and not a purely photochemical process (E. Kessler, in "Research in photosynthesis", Interscience Publishers, Ltd, London; N. P. Voskresenskaya, Dissertation). To elucidate this problem, use is usually made of low temperatures delaying the enzymatic effect without affecting the photochemical reactions. The present article contains data about the influence of temperature on the speed of the reduction under light or in darkness of nitrites in leaves of higher plants. This investigation also made use of chlorophyll-less leaves which are a convenient model for studying the nitrite reduction during exposure to light as compared with that in normal green leaves. The results obtained show that raising the temperature increases the reduction speed of both nitrates and nitrites. This leads the authors to

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ACC NR: AP6020316

believe that this is also the case of plants cultivated on soil, though the effect is obscured by the nitrites obtained as a result of the more intense reduction of the existing nitrates at the higher temperatures. The delaying influence of low temperature is particularly pronounced in nitrite reduction in chlorophyll-less leaves during exposure to light and during the reduction of green leaves in darkness. This paper was presented by Academician I. Emanouiloff on 27 March 1965. Orig. art. has: 3 tables. [Orig. art. in Eng.] [JPRS]

SUB CODE: 06 / SUBM DATE: 27Mar65 / ORIG REF: 001 / OTH REF: 005
SOV REF: 004

Card 2/2 97

VAKLINOVA, S. G. Cand Biol Sci -- (diss) "Study of the action of forms of
nitrogen upon the content of pigments and ^{upon} the nature of ^{the} products of photosynthesis
in corn and bean sprouts." Mos, 1958. 22 pp (Inst of Biochemistry im A. N.
Bakh, Acad Sci USSR), 150 copies (KL, 52-58, 100)

VAKLINOVA, S.G.; DOMAN, N.G.; RUBIN, B.A.

Effect of different nitrogen forms on the assimilation products of leaves and their distribution in aerial and underground organs of corn seedlings [with summary in English]. Fiziol.rast. 5 no.6:516-523 N-D ' 58. (MIRA 11:12)

1. Institut rasteniyevodstva Bolgarskoy AN, Sofiya; Institut biokhimii imeni A.N. Bakha AN SSSR, Moskva.

(Corn (Maize)--Fertilizers and manures)

(Plants, Effect of nitrogen on) (Plants--Assimilation)

AUTHORS: Rubin, B. A., Vaklinova, S. G.

20-119-1-35/52

TITLE: The Influence of the Form of Nitrogen Upon the Accumulation of Chlorophyll and Upon the Oxidative System in Zea mays L. (Vliyaniye formy azota na nakopleniye khlorofilla i okislitel'nyu sistemu kukuruzy)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 1, pp. 129-132 (USSR)

ABSTRACT: Several works (references 1-3) are devoted to the investigation of different doses of nitrogen as a factor influences the intensity of photosynthesis as well as the nature of the products of the latter. The problem of the influence of different forms of nitrogen mostly was not taken into consideration. From publications (references 4-8) is known that by a nitrate food the quantity of organic acids in the plants increases as compared to plants with ammonia food. N. S. Turkova (ref. 9) advocates an opposite opinion. The object of the present paper was the investigation of the influence of these two forms of nitrogen food upon the quantitative content of dyes and upon the activity of some oxidative-reductive processes. The experiments were performed

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The Influence of the Form of Nitrogen Upon the Accumulation of Chlorophyll and Upon the Oxidative System in Zea mays L. 20-119-1-35/52

in 2 series: series I. Maize plants were cultivated in light as liquid cultures. The variants were: 1) control - in water without addition of nitrogen; 2) on nitrate-nitrogen as NaNO_3 ; 3) on ammonium nitrogen as $(\text{NH}_4)_2\text{SO}_4$. Series II. The influence of NO_3^- and NH_4^+ upon the greening of the plants was determined. The variants were as in series I. The plants were kept in the dark for 5 days and then put into the light. As is to be seen from table 1 the influence of both forms of nitrogen upon the development of the plants is unequal. The plants on nitrate-nitrogen developed best. As well the weight as the length of the stem superior to those of the plants with ammonia-nitrogen. Both forms of nitrogen suppress the length of the roots the weight of which, however, exceeds that of the control (agrees with reference 13). In the case of nitrate-nitrogen-food the quantity of a- and b-chlorophyll in all tests was higher than in the control- and ammonia-plants (table 2). The latter plants, cultivated in the light, exceeded the control plants with regard to the chlorophyll content. But when these plants were first kept in the dark and then brought into the light, their quantity of chlorophyll was considerably smaller than in the control. The ratio

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The Influence of the Form of Nitrogen Upon the Accumulation of Chlorophyll and Upon the Oxidative System in Zea mays L. 20-119-1-35/52

between a- and b-chlorophyll independent on the illumination decreases by nitrate-nitrogen and increases by ammonia-nitrogen. That means that the more intensively oxidated chlorophyll-form (form b) is synthesized on nitrate nitrogen. The activity of the oxidative enzymes may, so to speak, serve as index of the oxidative-reductive regime in the plant tissues. Table 3 shows that the activity of the catalase and peroxydase as well in the leaves as in roots is higher in plants which were cultivated on ammonia-food. In order to find out whether this increased activity has to compensate the lack of active nitrate-oxygen in the plant, experiments were performed in which part of the plants was continuously exposed to the air, whereas the other part was cultivated under oxygen deficiency. Table 4 shows that the plants on nitrate nitrogen thrive very well even without additional exposure to the air. But in plants on NH_3 without exposure to the air of the organs above the ground the growth of the latter and that of the roots is retarded (in agreement with reference 14). The activity of the catalase decreases in the variant with nitrate nitrogen, where the chlorophyll

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The Influence of the Form of Nitrogen Upon the Accumulation of Chlorophyll and Upon the Oxidative System in Zea mays L. 20-119-1-35/52

synthesis takes place more intensively (ref. 15). In contrast to this polyphenoloxydase is more active in plants fed with nitrates. This only refers to leaves, as this activity in the roots of ammonia plants is higher (table 5). The results of series II are given in table 6. The plants green faster on the nitrate form than on ammonia. For the quantity of the ratio between chlorophyll a and b the previous influence of the dark is of no importance. Chlorophyll a is faster synthesized, the ratio between the two forms on nitrate nitrogen always remaining smaller than on ammonia nitrogen. The absolute quantities of chlorophyll a and b decrease with the lengthening of the duration of the stay in the dark. There are 6 tables and 15 references, 13 of which are Soviet.

PRESENTED:

November 21, 1957, by A. I. Oparin, Member, Academy of Sciences, USSR

SUBMITTED:

October 17, 1957

Card 4/4

AUTHORS: Doman, N. G., Vaklinova, S. G. SOV/20-122-4-32/57

TITLE: The Effects of Different Nitrogen Forms on the Composition of Labelled Photosynthetic Products in Maize and Phaseolus (Vliyaniye raznykh form azota na sostav mechenykh produktov fotosintesa u kukuruzy i fasoli)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 4, pp 653 - 656 (USSR)

ABSTRACT: Initially, various factors are discussed which influence the distribution of the photosynthetically assimilated carbon (Refs 1-7). Under these conditions, an improved nitrogen nutriment is said to increase the incorporation of carbon in the proteid complex and in the amino acids (Ref 7). Under certain conditions, ammonia nitrogen promotes the formation of the photosynthetic process. Nitrate nitrogen, however, always does so (Ref 8). Therefore, the authors have supposed that the nutrition of the plant with nitrate (oxidized and ammonia (reduced) nitrogen) essentially affects the formation of photosynthetic products (also of intermediates), as was proved for chlorophyll (Ref. 8). In

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The Effects of Different Nitrogen Forms on the
Composition of Labelled Photosynthetic Products in Maize and Phaseolus

SOV/20-122-4-32/57

order to clarify this question, leaves of 10-15 day old maize and phaseolus-plants were exposed in an atmosphere containing C¹⁴ for 1,5 and 10 minutes (method according to reference 9). The leaves were from plants which were cultivated either with nitrate - or ammonia nitrogen or without nitrogen. From the results in table 1 it is seen that the highest portion of radioactivity in the maize leaves is in the fraction soluble in alcohol. The alcohol-insoluble portion is barely 1-5% and increases with prolonged exposure. In the phaseolus, however, the insoluble portion is 24% of the total activity. This difference is due to the higher amount of proteins built up in the legumes, most of these proteins being insoluble in 80% alcohol. The highest amount of compounds which are insoluble in alcohol is found in the leaves of plants brought up without nitrogen, with an exposure of 5 and 10 minutes. Here, starch is produced in higher quantities (Refs 11, 12). From table 1 it is seen that the nitrogen forms exert no significant influence on the ratio of the radioactivity

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The Effects of Different Nitrogen Forms on the
Composition of Labelled Photosynthetic Products in Maize and Phaseolus

SOV/20-122-4-32/57

of all the compounds, soluble and insoluble in alcohol. The experimental results, however, show that the nutrition of plants with various nitrogen forms increases the radioactivity of the free amino acids. The findings further prove that the nutrition of plants with various nitrogen forms affects the method of carbon assimilation by producing distinct differences in the composition of labelled photosynthetic products. Further communications on character and cause of these differences will follow. There are 1 figure, 3 tables, and 17 references, 15 of which are Soviet.

PRESENTED: July 23, 1958, by A.I.Oparin, Member, Academy of Sciences, USSR

SUBMITTED: July 15, 1958

Card 3/4

The Effects of Different Nitrogen Forms on the
Composition of Labelled Photosynthetic Products in Maize and Phaseolus

SOV/20-122-4-32/57

Card 4/4

VAKLINOVA, Stanka

Contemporary theories on photosynthesis and its products. Spisanie
BAN 5 no.2:31-44 '60. (EEAI 9:11)
(Photosynthesis)

VAKLINOVA, S. G.; SALCHEVA, G.

Results of experiments with wheat seed stimulated and hardened
before sowing. Izv Inst biol BAN 11:162-176 '61.
(EEAI 10:9)

(Wheat)

VAKLINOVA, St., kandidat na biologichnite nauki

*Essence and meaning of photosynthesis. Priroda Bulg 11 no. 1:43-47
Ja-F 62.*

VAKLINOVA, S.; SHTARBANOVA, E.; TOMOVA, N.

Using the nitrate and ammonia nitrogen at the formation of some amino acids in the process of photosynthesis. Doklady BAN 15 no.3:293-296 '62.

1. Predstavleno akad. R. Georgievoy [Georgieva, R.].

VAKLINOVA, Stanka; SECHENSKA, Milka

Photosynthetic phosphorylation. Priroda Bulg 13 no. 2:
44-46 Mr-Apr '64.

VAKLINOVA, S.

Photooxidation of hydroxylamine in isolated chloroplasts. Doklady
BAN 17 no.3:283-285 '64.

1. Submitted by Academician I.Emanouilov [Emanuilov, I.].

SOLENGKA, M. [Sechenaka, M.], VACHKIN, A.

Synthesis of glutamic acid and alanine as a result of transaminase reactions in isolated pea chloroplasts. Doklady BAN 17 no. 10, pp. 956 '64.

I. M. Popov Institute of Plant Physiology, Sofia. Submitted May 16, 1964.

VAKLINOVA, S.; TOMOVA, N.; NIKOLIOVA, E.; DECHEV, G.

Photooxidation of hydroxylamine coupled with the uptake of oxygen
in isolated chloroplasts. Doklady BAN 17 no.11:1051-1054 '64.

1. Institute of Plant Physiology of the Bulgarian Academy of Sciences.
Submitted July 16, 1964.

VAKLINOVA, S.; TOMOVA, N.

The influence of temperature on the reduction of nitrite under illumination and in darkness in higher plants. Dokl. Bolg. akad. nauk 18 no.7:671-674 '65.

1. Submitted March 27, 1965.

VAKLINOVA, S.; TOMOVA, N.; NIKOLOVA, E.; SECENSKA, M.

The effect of certain factors on the photooxidation of hydroxylamine in isolated chloroplasts. Dokl. Bolg. akad. nauk
18 no.7:659-662 '65

1. Submitted on March 20, 1965.

L 02152-67

ACC NR: AP6035985

SOURCE CODE: BU/0011/65/018/003/0257/0260

SALCHEVA, G., VAKLINOVA, S., Institute of Plant Physiology of the Bulgarian Academy of Sciences, Plant-Growing Institute, Sofia

"Assimilation and Distribution of C¹⁴ in Winter Wheat Kept at Various Temperatures"

31
B

Sofia, Doklady Bolgarskoy Akademii Nauk, Vol 18, No 5, 1965, pp 257-260

Abstract: /English article/ Essential changes occur in the structural state of the protoplasm and in the metabolism of winter wheat plants in the process of their hardening in autumn. It has been established that the hardened plants of winter wheat differ from the unhardened ones also by more stable chloroplasts (G. Salcheva, G. Samygin, Fiziologiya rasteniy, 10, 1960, 1). In connection with these changes of the chloroplasts with the process of hardening, it seemed useful to make a survey of photosynthesis and products in winter wheat kept at temperatures appropriate for the second stage of hardening (-3°, -5° C). Three tests were made with the frost-resistant variety No. 14 and the nonresistant variety No. 159. During the first two tests the plants were cultivated in winter, whereas during the third test they were cultivated at higher temperatures in spring. The tests show that under the influence of low temperatures (-3°, -5° C) there occurs a change in the ratio between the synthesized products in the process of photosynthesis, with an intensification of the synthesis of alcohol-insoluble compounds. These changes are more pronounced in the case of frost-resistant

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L 02152-67

ACC NR: AP6035985

variety No. 14, and this can be explained by the more profound changes occurring in it during the second stage of hardening. This variety differs from the nonresistant one in the greater content of labelled sugar when exposed to low temperatures. The nonresistant variety No. 159 shows a lower decrease in the intensity of assimilation at low temperatures. This paper was presented by Academician D. Yordanov on 20 November 1964. Orig. art. has: 2 tables. [JPRS]

TOPIC TAGS: wheat, plant metabolism, photosynthesis, tracer study, carbohydrate, plant chemistry, carbon/No. 159 wheat, No. 14 wheat

SUB CODE: 06, 02, 07 / SUBM DATE: 20Nov64 / SOV REF: 004

Card

2/2

Adh

ACC NR: AP7003867

SOURCE CODE: BU/0011/66/019/012/1187/1190

AUTHOR: Vaklinova, S.; Dencheva, A.

ORG: Institute of Plant Physiology, Bulgarian Academy of Science

TITLE: Accumulation of biomass and protein nitrogen in *Scenedesmus* cells exposed to various forms of nitrogen

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 19, no. 12, 1966, 1187-1190

TOPIC TAGS: algae, plant physiology, plant chemistry, altered gas atmosphere, nitrogen, photosynthesis, plant metabolism

ABSTRACT: This experiment was designed to trace the effect of nitrate, ammonia nitrogen, nitrite, and urea on the growth and biomass accumulation of *Scenedesmus quadricanda* 120. The culture was grown in Rou vessels at 26C, exposed to lamps for eight hours daily (3,500 lux) and supplied with a 1% CO₂-enriched air mixture. The culture medium lacked nitrogen (Chu) which was introduced after 16 hr (140 mg of nitrogen/liter) in the form of NaNO₃, NaNO₂, (NH₄)₂SO₄, (NH₂)₂CO. Samples were analyzed after six days. The quantity of absolutely dry biomass was determined by filtering a certain volume of suspension through a Seitz filter. The density of the

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UDC: none

ACC NR: AP7003867

suspension and pigment content were determined by the Lowry method. Tables 1-3 show some results of the experiment. The study demonstrated

Table 1. Optical density of suspension and pigment content

Variant	Opt. density of suspension	Pigment content mg/ml suspension	
		chlorophyll	carotene
Zero sample	0.134		
NaNO ₃	0.510	0.306	0.630
NaNO ₂	0.309	0.266	0.491
(NO ₃) ₂ SO ₄	0.289	0.275	0.409
(NH ₂) ₂ CO	0.589	0.333	0.671

Table 2. Biomass accumulation (number of cells, abs. dry matter and growth)

Variant	Number of cells per cm ³ suspension (x10 ⁶)	Abs. dry matter:		
		mg/100 ml suspension	per million cells in mg	Growth of dry matter against zero sample
Zero sample	292	11.5	0.41	100
NaNO ₃	1,304	42.5	0.32	373
NaNO ₂	664	19.6	0.29	171
(NH ₄) ₂ SO ₄	422	41.9	0.59	376
(NH ₂) ₂ CO	1,334	53.2	0.39	487

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ACC NR: AP7003867

Table 3. Protein nitrogen content

Varlants	Prot. nitr. in mg, per 100 mg dry matter	Prot. nitr. in mg, per million cells
NaNO ₂	3.43	2.63
NaNO ₃	3.18	4.75
(NH ₄) ₂ SO ₄	9.49	22.48
(NH ₂) ₂ CO	4.23	3.17

that various forms of nitrogen have a specific effect on Scenedesmus metabolism. Ammonia nitrogen stimulates protein synthesis and the accumulation of dry matter, while inhibiting cell division. Greatest biomass yield resulted from the use of urea nitrogen followed by nitrate nitrogen. The smallest absolute biomass yield occurs when nitrite nitrogen is used. This substance inhibits culture vitality and development.

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 003
ATD PRESS: 5113

Card 3/3

VAKLINOVA, St., st. n.s.

Sixth International Congress on Biochemistry. Nauch zhivot 7
no.4:21-22 O-D '64.

VAKLUSHEVA, M.

SURNAME, Given Names

Country: Bulgaria

Academic Degrees: not given

Affiliation:

Source: Sofia, Khizna, Vol IV, No 5, Sep/Oct 1961, pp 19-22

Data: "The Sensitivity of Dysentery Bacteria to Antibiotic and Sulfanilamide Preparations."

Authors:

✓ MANAKHILOV, R., Okruz Sanitation and Epidemiological Station in Khaskovo
(Okruzna Sanepidstantsiya)

✓ VAKLUSHEVA, M., United City Hospital in Dimitrovgrad
(Obedinena Gradska Bolnitsa)

(3)

GPO 981643

Vakman D. Ya.

ANTENNAS

"Optimum Linear In-Phase Antennas with Continuous Current Distribution",
by I.F. Sokolov and D.Ya. Vakman, Radiotekhnika i Elektronika, No 1,
January 1958, pp 46-55.

Dolph (Proceedings IRE, 1946, Vol. 34, No 6, page 335) developed a method for calculating the optimum linear in-phase antennas, consisting of individual dipoles. This method is extended by the authors to include antennas with continuous distribution of current along the dipole. They derive and analysed formulas for the directivity patterns, for the distribution of the current amplitude, and for the efficiency.

Card 1/1

Vakman D Ye

109-1-5/18

AUTHORS: Sokolov, I.F., Vakman, D.Ye.

TITLE: Optimum Linear In-Phase Antennas Having a Continuous Current Distribution (Optimal'nyye lineynyye sinfaznyye anteny s nepreryvnoy raspredeleniyem toka)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol.III, Nr 1, pp.46-55 (USSR)

ABSTRACT: The optimum radiation pattern of a directional antenna, as defined by Dolph (Ref.1) is the pattern which, for a given width of the main beam, has a minimum level of the side lobes, or, alternatively, at a given level of the side lobes, gives a minimum width of the main lobe. The problem of designing this type of antenna was solved by Dolph by means of the Chebyshev polynomial and the width of the main beam of the radiation pattern at a level, r , is expressed by Eq.(1), where R is the relative level of the side lobes and n is the number of the equidistant radiators. The parameter u is defined by :

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$$u = \frac{\pi d}{\lambda} \sin \theta \quad , \quad (2)$$

10)-1-5/10

Optimum Linear In-Phase Antenna Having a Continuous Current
Distribution

where d is the distance between the radiators, λ is the wavelength and θ is the angle measured from the perpendicular of the radiator (see Fig.1). Eq.(1) can be modified to cover the case of a continuous antenna, which can be regarded as being constructed of an infinite number of radiators; the length of the antenna is D and if D is assumed to be a constant, the spacing between the radiators decreases to 0 as n tends to infinity. By introducing a new variable defined by:

$$v = \frac{\pi D}{\lambda} \sin \theta \quad , \quad (3)$$

Eq.(1) can be expressed as Eq.(5), which can be solved with respect to r . The resulting solution is expressed by:

$$r = E(v) = \frac{ch \sqrt{\text{arch}^2 R - v^2}}{R} \quad (6)$$

The equation was used to construct a number of radiation patterns for various R and these are shown in Figs.2. An

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100-1-5/18

Optimum Linear In-Phase Antenna Having a Continuous Current
Distribution

attempt is made to evaluate the current distribution in the above optimum antenna. It is shown, however, (see Fig.4) that the current distribution is not physically realisable since the antenna should have considerable current jumps at its edges. An attempt is made, therefore, to determine the radiation patterns of the antenna in which the current distribution is a monotonically decreasing function, i.e., there are no sudden jumps at the edges. The radiation patterns of such antennas, referred to as the quasi-optimum antennas, is defined by Eq.(18). The resulting curves are shown by dashed lines in Figs.2. By comparing the curves for the optimum and the quasi-optimum antennas, it can be seen that the latter has a somewhat wider main lobe and a slightly higher first side lobe. The current distribution necessary to achieve the quasi-optimum radiation pattern can be found from Eq.(19). The equation can be solved approximately. The results shown in Fig.6 represent the current distribution calculated for various levels of the side lobes (from 20 to 60 db). From these

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100-1-5/10

Optimum Linear In-Phase Antenna Having a Continuous Current
Distribution

curves it is seen that the quasi-optimum current distribution is governed by a smooth monotonic function. If the side lobe level is decreased, the slope of the current distribution curve is increased and the current amplitude at the edge of the antenna is reduced. Also the directivity coefficients of the optimum and quasi-optimum antenna were calculated as a function of D and R and these are shown in Figs. 7 and 8. There are 3 figures and 2 English and 3 Russian references.

SUBMITTED: November 22, 1956

AVAILABLE: Library of Congress

Card 4/4

AUTHOR:

Vakman, D. Ye.

SOV/108-13-9-7/26

TITLE:

Computation of the Equivalent Parameters for Estimating the Heat Balance in the Condensers of Pulse Modulators (Raschët ekvivalentnykh parametrov dlya otsenki teplovogo rezhima kondensatorov impul'snykh modulyatorov)

PERIODICAL:

Radiotekhnika. 1958, Vol. 13, Nr 9, pp. 41-48 (USSR)

ABSTRACT:

This is an estimation of the factors involved in the operational conditions which are valid for condensers in pulse-generating circuit elements. The qualification of condensers to operate under these conditions is determined. In order to judge the qualification of a condenser for a certain pulse circuit it is not necessary to investigate its properties in a wide frequency band, as long as the examination is limited to a first order approximation. It is sufficient to determine the permissible current at an equivalent frequency, which is dependent upon the pulse shape of the condenser. In this manner it is possible to find the requirements imposed upon condensers for arbitrary pulse-generating circuit elements of modulators. This is true in particular for tank capacitors. First the pulse shape in the condensers of the pulse circuits is investigated

Card 1/2

Computation of the Equivalent Parameters for Estimating the Heat Balance in the Condensers of Pulse Modulators

SOV/108-13-9-7/26

and then rms current, the reactive power and the equivalent frequency is calculated. Finally a sample problem is computed. There are 2 figures and 7 references, 6 of which are Soviet.

SUBMITTED:

November 1, 1957 (initially) and January 13, 1958 (after revision)

Card 2/2

Совместно заседание с темой регистрации ра-
диоволн

А. В. Пропп,
В. Ф. Губкин

Исходные вопросы теории радиотехнического приема
при регистрации радиостанции УИИ

А. В. Пропп,
Г. М. Слободкин,
Н. Н. Леонова

Экспериментальное исследование радиотехнического при-
ема при дальности трансферции радиостанции УИИ
(с 12 до 16 часов)

В. Ф. Никитин

Об исследовании метода обнаружения импульсно-
го сигнала на фоне шума

Н. А. Леонов

Поправки, внесенные в программу высту-
пов на заседании

9 июня
(с 18 до 22 часов)

С. М. Леонов (Челюскинцев)

Результаты преобразования в аппаратуре на при-
емнике

А. Г. Дорфман

Расчет частотных характеристик аппаратуры (на
исходных исходных данных)

Д. Е. Виноков

К расчету нормальных процессов при частотной пе-
редаче

10 июня
(с 10 до 16 часов)

Л. А. Машков

Анализ работы радиостанции шестого участка

В. В. Шибалькин

Г. С. Маслов

Детерминированные и индетерминированные процессы
улучшения

В. М. Турин

К вопросу об оптимальности приема пара-
метрического сигнала многократными методами

report submitted for the Centennial Meeting of the Scientific Technological Society of
Radio Engineering and Electrical Communications in A. S. Popov (VSEIEN), Moscow,
8-12 June, 1959

AUTHOR: Vakman, D.Ye.

SOV/109-4-7-6/25

TITLE: Application of the Stationary Phase Principle to the
Evaluation of the Spectra of Radio Pulses

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 7,
pp 1124 - 1133 (USSR)

ABSTRACT: The method is based on the application of the following
formula (S.I. Bychkov - Ref 1 and N.I. Korman et al. -
Ref 2):

$$u(t) = Af(x)e^{-j[\omega_0 \tau x + K\Phi(x)]}$$

which represents a high-frequency pulse signal. The
parameters A , ω_0 and τ denote the amplitude, the
carrier frequency and duration of the pulse; $x = t/\tau$
is the normalised time, $f(x) < 1$ is a symmetrical
Gaussian-type envelope, K is the phase-modulation index,
which is equal to $2\pi\epsilon A\tau$, where ϵ is an electronically
caused frequency deviation; $\Phi(x) = \int_0^x f(x)dx$ describes

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Application of the Stationary Phase Principle to the Evaluation
of the Spectra of Radio Pulses

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the law of the phase change. This can be represented by Eq (1). The spectrum of the pulse is given by:

$$G(\xi) = A\tau\xi \int_{-\infty}^{+\infty} e^{-jK[\Phi(x) - \xi x]} dx = 2A\tau\xi \int_0^{+\infty} \cos K [\Phi(x) - \xi x] dx \quad (2)$$

The sub-integral function in Eq (2) can be expanded into a Taylor series, such as is shown in Eq (5). The spectrum can then be represented by Eq (6). This can easily be evaluated by employing the tables of the Fresnel integrals. The resulting formula is not very accurate and it is necessary to employ an approximating function, which is in the form of Eq (8). In this case, the spectrum is given by Eq (10). For the region of $0 < \xi < 1$, where $\xi = 1/K(\omega - \omega_0)\tau$ represents the

relative de-tuning, Eq (10) can approximately be represented by Eq (12). For the region of $\xi \geq 1$, the

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Application of the Stationary Phase Principle to the Evaluation
of the Spectra of Radio Pulses

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spectrum is given by Eq (20). The above formulae were employed to evaluate the spectra for a Gaussian pulse having an envelope of the type $f(x) = e^{-x^2}$. The results are plotted in Figure 3. The author expresses his gratitude to Ye.L. Feynberg for his interest and advice. There are 3 figures and 8 references, of which 7 are Soviet and 1 English; 1 of the Soviet references is translated from English.

SUBMITTED: April 29, 1958

Card 3/3

VAKMAN, D. Ye, Cand Tech Sci — (diss) "The action of frequency modulated vibrations on linear systems. Asymptotic methods of investigation," Moscow, 1960, 10 pp, 200 cop. (Moscow Aviation Institute im Sergo Ordzhonnikidze) (KL, 45-60, 125)

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S/109/60/005/04/011/028
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AUTHOR: Vakman, D.Ye.

TITLE: Signal Distortion in Delay Lines⁶

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 4,
pp 621-632 (USSR)

ABSTRACT: Taking the solution for a distortionless delay line as the first approximation, asymptotic corrections are introduced for real lines with a large number of sections. Video pulses, high-frequency pulses and pulses with frequency-modulated carrier are considered, when the modulation⁶ spectra are narrow ("slowly-varying" envelopes) in comparison with the delay-line bandwidth. However, it is permitted for the carrier frequency to be close to the cut-off frequency of the line. There are 6 figures and 9 references, 5 of which are Soviet, 1 German, 2 English and 1 Russian translation from English.

SUBMITTED: June 29, 1959

Card 1/1

4

VAKMAN, D.Ye.; IVANUSHKO, N.D., red.; SVESHNIKOV, A.A., tekhn. red.

[Asymptotical methods in linear radio systems] Asimptoticheskie metody v lineinoy radiotekhnike. Moskva, Izd-vo "Sovetskoe radio," 1962. 246 P. (Radio)

Monograph

UR/

ACC NR: AM5004544

Vakman, David Yefimovich

Complex signals and the principle of ambiguity in radar (Slozhnyye signaly i printsip neopredelnosti v radiolokatsii) Moscow, Izd-vo "Sovetskoye radio", 65. 0303 p. illus., biblio., index. 6,800 copies printed.

TOPIC TAGS: radar signal analysis, radar observation, quantum mechanics, radar homing

PURPOSE AND COVERAGE: The book contains several problems on the theory of complex signals used in radar. It examines the properties of the functions of ambiguity of Woodward. In particular, it analyzes the radar principle of ambiguity and its role in observations and emphasizes the principle difference, peculiar to radar observations. Principle attention is devoted to the synthesis of radar signals according to the functions of ambiguity. It analyzes constructive methods of synthesis, optimum signal forms and other problems. The book is intended for engineers, aspirants and students of advanced courses of radiotechnical specialties.

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UDC: 621.396.96

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Card

2/2

BLEKTA, M.; MACKU, Fr.; BENDL, J.; PESKOVA, V.; CHYTL, M.; OPPLT, J.;
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prednosta prof. dr. F. Herles Biochemicke oddeleni fakultni nemocnice
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[41] no.6/7:270-275 Ag '62.

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dr. J. Lukas, DrSc. II. int. klin. fak. vseob. lek. KU v Praze, prednosta
prof. dr. Fr. Herles Biochem. odd. fak. nemocnice v Praze 10,
prednosta dr. J. Opplt.
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(HYPERTENSION) (KIDNEY DISEASES)

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DrSc. Oddeleni pro klinickou biochemii LFH Ku v Praze, prednosta
MUDr. RNDr. J. Opplt.

(OBESITY metabolism)