

KOSSAKOWSKI, Jan; KOSSAKOWSKA, Stanisława; STODULSKI, Jarosław

Surgical therapy of congenital case of partial esophageal stenosis.  
Pediat. polska 34 no.1:77-80 Jan 59.

1. Z Kliniki Chirurgii Dziecięcej A. M. w Warszawie Kierownik: prof.  
dr med. J. Kossakowski. Adres: Warszawa, ul. Litewska 16.  
(ESOPHAGUS, stenosis,  
congen. partial., surg. (Pol))

BARYLKO-PIKIELNA, N.; ZOLTOWSKA, A.; KOSSAKOWSKA, T.; PIETRASZEK, Z.

An attempt of evaluating by objective measurements the organoleptic quality of selected examples of canned ham. Prac: instyt i labor bad przem spoz 12 no.1:1-10 '62.

1. Instytut Przemyslu Miesnego, Zaklad Technologii, Warszawa.

KOSSAKOWSKA-KOSMINSKA, Halina

Ferreira-Maaques method in the treatment of keloid. Przegl. dermat.,  
Warsz. 4 no.4:309-312 July-Aug 54.

1. Ze Szpitala im. E.Sonnerberga w Lodzi. Dyrektor i ordynator:  
prof. dr M.Mienicki.

(FIBROMA,

keloid, ther., vitamins B<sub>2</sub>, C, & PP with iron cpds.)

(VITAMIN B<sub>2</sub>, therapeutic use,

keloid, with vitamins C & PP & iron cpds.)

(VITAMIN C, therapeutic use,

keloid, with vitamins B<sub>2</sub> & PP & iron cpds.)

(NICOTINIC ACID,

vitamin PP, ther. of keloid, with vitamins B<sub>2</sub> & C & iron cpds.)

(IRON, therapeutic use,

keloid, with vitamins B<sub>2</sub>, C & PP)

~~KOSSAKOWSKA-SUCH, Janina~~

Analysis of the gravel of the Dunajec River between the Pieniny Mountains and the Roznow Lake. Biuletyn Geolog 1 no.1:104-125 '61.

1. Chair of Geology and Economics of Deposits, University, Warsaw,

BOBLOWSKI, W.; KOSSAKOWSKA-SUCH, J.

Exactness of rounding degree measurements of rock grains. Biuletyn  
Geolog 1 no.1:138-147 '61.

1. Chair of Geology and Economics of Deposits, University, Warsaw.

*Kossakowski, A.*

KURLOWICZ, W.; KUZNIECOW, A.; KOSSAKOWSKI, A.

A method of preparation of lyophilized BCG vaccine. Polski tygod.  
lek. 7 no. 25:837-838 23 June 1952. (CLML 23:3)

1. Of the State Institute of Hygiene in Warsaw.

KURYLOWICZ, W.; KUZNIECOW, A.; KOSSAKOWSKI, A.

Method of preparation of frozen dried BCG vaccine. Gruslica 20  
no. 5:621-638 Sept-Oct 1952. (CLML 24:2)

1. Of the State Institute of Hygiene in Warsaw.

KOSSAKOWSKI, A.; KWIATKOWSKI, S.; PRUSKI, S.

Some notes on the theory of pressure effects on spectral lines. Acta physica Pol 24 no.3:327-337 S'63.

1. Department of Physics, N.Copernicus University, Torun.



KUZNIECOW, Anatoliusz; KOSSAKOWSKI, Andrzej

Application of slide culture in bacteriologic diagnosis of tuberculosis.  
Przegl. epidem., Warsz. 8 no.4:265-273 1954.

1. Z Panstwowego Zakladu Higieny w Warszawie.  
(TUBERCULOSIS, diagnosis,  
bacteriol., slide culture technic)

KOSSAKOWSKI, A., dr.

Causes of therapy of reading-spelling disabilities. Magy pszichol szemle 18 no.2:184-194 '61.

1. Egyetemi Pszichologiai Intezet, Leipzig.

BERNACKA, Krystyna; KOSSAKOWSKI, Dominik

Anti-rheumatic drugs and acute phase tests in the treatment of chronic progressive rheumatism. Reumatologia (Warsz.) 2 no.3: 255-260 '64.

1. Z I Kliniki Chorob Wewnętrznych Akademii Medycznej w Białymstoku (Kierownik: doc. dr B. Bogdanikowa).

4

BA  
B-1

KOSSAKOWSKI, J.

*Synthetic core adhesives. J. Michalowski and J. Koszakowski. (Proc. Chem., 1952, 8, 190-202). - Of a no. of synthetic adhesives for model work, the most promising was chlorinated spindle oil. The oil trickles down a Ni-plated Fe tower against a current of Cl<sub>2</sub>, both preheated to 80°, at rates of flow giving a product containing 30-35% of Cl; the temp. should not exceed 140°. Air is blown into the chlorinated oil at 200° until the desired η and d (usually 3-4° Engler and 1.050-1.060) are achieved. R. TRUBCOX.*

KOSSAKOWSKI, J.

Interpretation of efficiency with regard to fluorescent lamp fittings for external lighting. p. 189.

PRZEGLAD ELEKTROTECHNICZNY. (Stowarzyszenie Elektrykow Polskich) Warszawa, Poland, Vol. 35, no. 5, May 1959.

Monthly list of East European Accessions (EEAI) IC, Vol. 9, no. 1, Jan. 1960.

Uncl.

KOSSAKOWSKI, J.

Project for training of pediatric surgeons. Szpital.polsk. 3 no.4:  
553-560 1950. (CJML 20:6)

1. Author is Docent and M.D.

KOSSAKOWSKI, J,

KOSSAKOWSKI, J., prof. dr

Methods of work by specialists in the field of pediatric surgery.  
Zdrowie pub., Warsz. no.3:185-190 May-June 54.

(PEDIATRICS,

\*in Poland, specialization in pediatric surg.)

(SURGERY,

\*in Poland, specialization in pediatric surg.)

KOSSAKOWSKI Jan (adres: Warszawa, Marszalkowska 8 m 13)

Social significance of certain problems in pediatric surgery.  
Pediat pol 29 no.1:105-110 Ja '54. (REAL 3:8)

1. Z Kliniki Chirurgii Dziecięcej Akademii Medycznej w Warszawie,  
Kierownik: prof. dr med. J.Kossakowski. (Otrzymano: 10.X.1953)  
(PEDIATRICS,  
\*surg. in, soc. aspects)  
(SURGERY,  
\*in pediatrics, soc. aspects)



KOSSAKOWSKI, JAN

KOSSAKOWSKI, Jan

Dr med. Stefan Kielkiewicz. Pediat. polska 29 no.4:455-456  
Ap '54.

(OBITUARIES,  
\*Kielkiewicz, Stefan)

KOSSAKOWSKI, J. prof.dr.

Remarks on post-graduate work of physicians in pediatric surgery.  
Zdrowie pub., Warsz. no.3:227-233 May-June '55.

1. Kierownik Kliniki Chirurgii Dziecięcej A M w W-wie.  
(SURGERY  
pediatric, post-graduate educ.in Poland)  
(PEDIATRICS  
in Poland, post-graduate work in surg.)

KOSSAKOWSKI, Jan

Achievements in the field of pediatric surgery in Poland and difficulties in its further development. *Pediat. polska* 31 no. 7:733-738 July 56.

1. Kierownik Kliniki Chirurgii Dziecięcej A.M. w Warszawie, Warszawa, Litewska 16.

(PEDIATRICS,  
pediatric surg. in Poland (Pol))

(SURGERY,  
same)

KOSSAKOVSKI, J.

~~-KOSSAKOVSKIY, Yan [Kossakovsky, Jan], prof.~~

Congenital obstruction of the esophagus. Khirurgia 32 no.10:  
11-17 0 '56 (MIRA 12:7)

1. Iz kliniki detskoy khirurgii (rukovoditel' - prof. Jan Kossakovskiy) Meditsinskoy akademii v Varshave.  
(ESOPHAGUS, abnorm.  
atresia & stenosis, surg. in child.)

KOSSAKOWSKI, J., Prof., Dr.

Main problems of pediatric surgery. Cesk. zdravot. 5 no.3:  
164-167 Mar 57.

1. Professor detske chirurgie na lekarske akademii ve Varsave.  
(PEDIATRICS, surgery,  
Cz))

KOSSAKOWSKI, Jan

Congenital obstruction of the esophagus. Postepy chir. no.5:5-25 1958.

(ESOPHAGUS, abnorm.

stresia, surg. (Pol))

BIALOWAS-WYSOCKA, K.; KOSSAKOWSKI, J.

Observations on sudden thoracotomies in suppurative pulmonary and pleural diseases. *Pediat. polska* 34 no.1:13-23 Jan 59.

1. Z Kliniki Chirurgii Dziecięcej A. M. w Warszawie Kierownik: prof. dr med. J. Kossakowski.

(LUNG DISEASES, in inf. & child,  
suppurative dis., thoracotomy (Pol))

(PLEURA, dis.  
suppurative dis. in child., thoracotomy (Pol))

KOSSAKOWSKI, Jan

Observations on aorto-pulmonary anastomosis in Fallot's tetralogy in children. Polski przegl. chir. 33 no.11:1257-1267 '61.

1. Z Kliniki Chirurgii Dziecięcej AM w Warszawie Kierownik: prof. dr J. Kossakowski.

(TETRALOGY OF FALLOT surg)



KOSSAKOWSKI, Jan

The polish production of mercury-vapor bulbs.  
Przeł elektrotechn 38 no.5:224. '62.

KOSSAKOWSKI, Jan

On cooperation between surgeons and anesthesiologists. Polski  
przeł. chir. 35 no.1:1-5 '63.

(SURGERY, OPERATIVE) (ANESTHESIA)

TYSZKA, Janusz, mgr inz.; SZOKALSKI, Zygmunt, mgr inz.; KOSSAKOWSKI, Jan, inz.

Properties of high-pressure mercury vapor lamps made in Poland.  
Przeł elektrotech 40 no.3:Supplement: Techn swietl 3 no.2:153-  
156 Mr'64

1. Zakłady Wytworcze Lamp Elektrycznych im. Rozy Luksemburg,  
Warszawa.

KOSSAKOWSKI, Jan

Treatment of congenital atresia of the anus and rectum in children. Pol. przegl. chir. 35 no.10/11:1156-1158 '63.

1. Z Katedry Chirurgii Dziecięcej AM w Warszawie Kierownik: prof. dr J. Kossakowski.

(ANUS) (RECTUM) (ABNORMALITIES)  
(SURGERY, OPERATIVE)  
(INFANT, NEWBORN, DISEASES)

KASPERLIK-ZALUSKA, Anna; KOSSAKOWSKI, Jacek

A case of Cushing's syndrome treated by surgery. Pol. przegl. chir. 37 no.4:Suppl:447-452 Ap'65.

1. Z I Kliniki Chorob Wewnetrznych Studium Doskonalenia Lekarzy w Warszawie (Kierownik: prof. dr. med. W. Hartwig) i Oddziału Urologicznego Szpitala Bielńskiego w Warszawie (Kierownik: dr. med. J. Frynbaum).

KOSSAKOWSKI, J.

Review of 121 operations for Fallot's tetralogy in children.  
Pol. przegl. chir. 36 no.3:307-313 Mr '64.

1. 3 Kliniki Chirurgiczne Dziecięcej Akademii Medycznej w  
Warszawie (Kierownik prof. dr J. Kossekowski).

KOSCIKOWSKI, Jan, inż.

Problems of choosing the proper high-pressure mercury-  
vapor lamps and their reactors according to the supply conditions.  
Przełł elektrotechn 40 no.9:Suppl.:Techn swietl 3 no.5:418-420 S '64.

KOSSAKOWSKI, Jozef

Coexistence of the crayfish *Astacus astacus* L. and *Astacus leptodactylus* Esch. in Loby Lake. *Rocz nauk roln zootechn*  
84 no.2:431-455 '64.

1. Institute of Inland Water Fisheries, Olsztyn.



KOSSAKOWSKI, Mieczyslaw, inz.; RUSOCKI, Andrzej, mgr inz.; WELAZNI, Jerzy, inz.

Mining Machine Works in Piotrkow Trybunalski. Przegl mech 22  
no.7/8:238-240 10-25 Ap '63.

1. Mining Machinery Works, Piotrkow Trybunalski.

KOSSAKOWSKI, M.

The Swedish Association of the Cooperatives of Slaughterhouses. p.41

GOSPODARKA MIESNA. (Polskie Wydawnictwa Gospodarcze) Warszawa, Poland  
Vol. 11, no. 7/8, July/Aug. 1959

Monthly List of East European Accessions. (EEAI) LC Vol. 9, no.1, Jan. 1960

Uncl.

<sup>7</sup>  
KOSSAKOWSKI, Mirosław, inż.

Roads in Iraq. Drogownictwo 17 no. 5:125-126. Ry '62.

KOSSAKOWSKI, S.

Methods of long-distance regulation of hot-water heating. p. 237.  
ZAG, MODA I TECHNIKA SANITARNA, Warszawa, Vol. 29, no. 7, July 1955.

SO: Monthly List of East European Accessions, (SEAL), LC, Vol. 4, no. 10, Oct. 1955,  
Uncl.

1/1

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AUTHOR: Kossakowski, Stefan--Kossakovski, S. (Doctor; Pulawy); Kujawski, Janusz 33  
(Pulawy) 6

ORG: Veterinary Service Research Center (Osrodek Badawczy Sluzby Weterynaryjnej)

TITLE: Poisoning of domestic animals with organic phosphate pesticides 6

SOURCE: Medycyna weterynaryjna, no. 9, 1965, 513-517

TOPIC TAGS: toxicology, pesticide, organic phosphorus compound, commercial animal

ABSTRACT: Data on the 2 organic phosphate pesticide products manufactured in Poland (Asofos and Foschlor) thorough analysis of Polish and foreign reports on domestic animal poisonings with these and related compounds; tabulation of enzymatic and toxic effects; symptoms, pathologic changes, treatment. Orig. art. has: 2 tables. [JPRS: 33,500]

SUB CODE: 06 / SUBM DATE: none

IOLAND / Diseases of Farm Animals. Diseases Caused by Viruses and Rickettsiae. R-2

Abs Jour : Ref Zhur - Biol., No 17, 1958, No 78951

Author : ~~Kossakowski, Stefan~~

Inst : Not given

Title : Complications After the Innoculation of Dogs Against Fever by the Combined (Simultaneous) Method.

Orig Pub : Wojskowy przegl. weteryn., 1956, 27, No 3, 30-33

Abstract : 34 dogs under 1 year were inoculated with an antiserum and dry vaccine of the Bering firm. Before inoculation all of the dogs were investigated for the presence of helminths and in the needed cases vermifuge treatment was carried out. In 38% of the inoculated dogs, temperature increased to 40.5° and higher, prolonged diarrhea appeared, sometimes blood weakness, full loss of appetite

Card 1/2

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S/194/62/000/001/052/066  
D201/D305

AUTHORS: Kossakowski, Zdzisław, Tor, Bogdan, Zieńkiewicz, Ryszard and Derulski, Zygmunt

TITLE: Design and assessment of technical requirements and of the measuring methods for UHF FM transmitters and receivers, used in mobile land communication systems of the Polish People's Republic

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 1, 1962, abstract 1-7-145 i (Prace Inst. Łączn., 1960, 7, no. 2, 3-37)

TEXT: The assessment is given of technical requirements and of the methods of measurements as applied to the mobile equipment for land operation. It is suggested that these requirements and methods be included in the Radio Communication Specifications issued by the Department of Long Distance Communications in 1960. The technical requirements and the methods of measurements apply to the mobile equipment, operating at frequency ranges 33-35, 44-46, 150-156

Card 1/2

KOSSAKOWSKI, Z.A.

3898

621.396.931 : 625.1

Kasia M., Koszakowski Z. A. Short-Distance Wireless Equipment for  
Railway Purposes.

MN

„Urządzenie do radiolączności krótkodystansowe) dla potrzeb kolej-  
nictwa". (Prace Przem. Inst. Telekom. No. 13—14), Warszawa, 1954, PWT,  
7 pp., 10 figs., 1 tab.

A description of equipment, developed at the Industrial Telecom-  
munications Institute, providing one-way R. F. channel from the dis-  
patcher to the engine driver of a steam engine at a marshalling yard.  
The equipment consists of two parts viz. a portable transmitter for the  
dispatcher and a receiver, mounted on the steam engine, for the engineer.  
It operates in the range 32...41 Mc/s on the A. M. basis. The power  
output of the transmitter amounts to 250 mW, the operating range is  
3 km. In view of the usual locomotive top dimensions, the receiving  
antenna has the shape of an inverted L. The transmitting antenna is

designed as a flexible vertical rod of a height  $h < \frac{\lambda}{8}$ , to allow for the  
specific working conditions of the dispatcher.

①

BOYKOV, A.; KOSSARZHEVSKIY, M.

Fire in a high-power transformer. Pozh. delo 4 no.6:17 Je '58.  
(Electric power plants--Fires and fire prevention) (MIRA 11:5)

MILANOWSKA, Kazimiera; KOSSATZ, Danuta

Notes on its possibilities and results of late rehabilitation of patients with fractures of the cervical spine. Chir. narzad. ruchu ortop. Pol. 28 no.7:805-806 '63

1. Z Kliniki Ortopedycznej Akademii Medycznej w Poznaniu (Kierownik: prof. dr. W. Dega) i z Centrum Rehabilitacyjnego przy Sanatorium dla Nerwowo Chorych w Koscinie (Dyrektor: dr. K. Kuczevska).



KOSSAYA, A.I.; GRAEOVSKAYA, T.V.

Method of evaluating diagnoses made by first aid physicians.  
Zdrav. Ros. Feder. 7 no.10:23-26 0'63 (MIRA 16:11)

1. Iz Kiyevskoy stantsii skoroy pomoshchi (glavnyy vrach  
N.A.Lengauer).

\*

KOSSAYA, I.I.

KOSSAYA, I.I. [deceased].

Using a recording microphotometer for measuring the intensity of  
X-ray interference. Zav. lab. 23 no.12:1502-1503 '57. (MIRA 11:2)  
(X rays) (Microphotometer)

S/137/62/000/001/141/237  
A052/A101

AUTHORS: Starodubov, K. F., Kossaya, I. I.

TITLE: The change in mechanical properties of low-carbon steel following ageing

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 35, abstract 11240  
("Nauchn. tr. Dnepropetrovsk. metallurg. in-t, no. 36, 1958, 59-71)

TEXT: The effect of tempering conditions, temperature (50 - 650°C) and duration (0.5 - 60 hours), on mechanical properties ( $\sigma_b$ ,  $\sigma_s$ ,  $\delta$ ,  $\psi$ ,  $\alpha_k$ ) and  $R_E$  of hot-rolled rod, cold-rolled sheet and boiler sheet grade 10 steel was investigated. The maximum increase of  $R_E$  (by 10 - 12 units),  $\sigma_b$  (by 8 - 10 kg/mm<sup>2</sup>) and  $\sigma_s$  (by 7 - 8 kg/mm<sup>2</sup>) was observed after 10 - 15 hours' ageing at 50°C. At the same time a decrease of  $\delta$  by 3%, of  $\psi$  by 5% and a sharp drop of  $\alpha_k$  took place.

T. Fedorova

[Abstracter's note: Complete translation]

Card 1/1

KOSSECKI, J.

On a certain problem of plane linear viscoelasticity.  
Bul Ac Pol tech 12 no. 1: 39-43 '64

1. Department of Mechanics of Continuous Media,  
Institute of Fundamental Technical Problems,  
Polish Academy of Sciences, Warsaw. Presented  
by W. Nowacki.

KOSSECKI, Jozef

Generalized plane state of stress in a rotating viscoelastic disk with an elastic hoop. Rozpr inz PAN 12 no.2:297-307 '64.

1. Department of Mechanics of Continuous Media, Institute of Basic Technical Problems, Polish Academy of Sciences, Warsaw.

KOSSEK, V., inzhener

Safety of petroleum tankers sailing under new operating conditions.  
Rech. transp. 14 no. 4:9-10 Ap '55. (MLRA 8:6)  
(Tank vessels)

BOGDANOV, P.; DOBREV, D.; KOSSEV, R.; PIRYOVA, B.

A method of measuring the blood pressure of man in a water environment. Dokl. Bolg. akad.nauk 17 no.1:93-95 '64

1. Submitted by Academician D. Oranovats.

ZOLOTOVITCH, G. [Zolotovitch, G.]; KOSSEVA, D. [Koseva, D.]; DECHEVA, R.

Examining certain substances in sound and abscising flower buds  
of *Rosa damascena* Mill. Doklady BAN 17 no.11:1059-1062 '64.

1. Experiment Station for Roses and Essential Oil Plants, Kazanluk.  
Submitted July 11, 1964.



KOSSEY, J.

CERVENANSKY, J.

CZECHOSLOVAKIA

no academic degree indicated

Orthopedic Clinic, Medical Faculty, Comenius University (Ortopedická klinika  
lékarsko fakulty University Komenského) Bratislava; Director: corresp. member  
SAV, Prof. J. Cervenansky MD, and Oncological Research Institute (Vyskumny  
ustav onkologicky) Bratislava; Director: corresp. member SAV, docent V. THURZO MD.

Bratislava, Bratislavské Lekárske Listy, No 8, Oct 62, pp 465-470.

"Aneurysmal Bone Cysts"

Co-author:

KOSSEY, J. same as above

THURZO, V.; MUZIKOVA, M.; KOSSEY, P.

Attempted transfer of Crocker sarcoma 180 with acellular filtrate.  
Cesk.onkol. 1 no.3-4:249-253 1954.

1. Vyskumny ustav onkologicky, Bratislava. MUDr. Viliam Thurzo,  
chlen koresp. SAV, RNDr. Maria Muzikova, MUDr. Peter Kossey, Brati-  
slava, ul. Ceskoslovenskej armady 17.

(NEOPLASMS, extr transplantation,

Crocker sarcoma 180, in acellular filtrates)

(SARCOMA, transplantation,

Crocker sarcoma 180, transpl. in acellular filtrates)

KOSSEY, P.

HLAVAYOVA, E., Dr.; KOSSEY, P., MUDr (Bratislava, ul. GSA 17)

Metastases of rat tumor BS-1 after intratesticular transplantation.  
Cesk.onkol. 2 no.2-3:133-137 1955.

1. Vyskumny ustav onkologicky v Bratislave.

(NEOPLASMS, transplantation,

intratesticular implant of rat tumor BS-1, metastases)

(TESTES, neoplasms,

exper. implants of tumor BS-1 in rats, metastases)

THURZO, Viliam; SVEC, Frantisek; HLAVAYOVA, Elena; KOSSEY, Peter

Experimental erythroleukaemia induced by cell-free filtrates  
from rat tumours. Cesk. onkol, 3 no.4:267-269 1956.

1. Oncological Research Institute, Bratislava.  
(ANEMIA, ERYTHROLEUKOBLASTIC, experimental,  
osteosclerotic, prod. by inject. of cell-free  
rat tumor filtrates)  
(NEOPLASMS, experimental,  
cell-free rat tumor filtrates causing osteosclerotic  
anemia)

RUSS EY P

1862. Erythro-leukemia in the rat caused by cell-free filtrate of sarcoma. F. Svoc, E. Hlavay, V. Thurzo, and P. Kossey *Acta Anat. Bratisl.*, 1937, 17, 31-41 [Abt. f. exp. Krebsforsch., *Onkolog. Inst. zu Bratislava, Czechoslovakia*]. - Subcut. injection of cell-free filtrates of DS tumour in young rats produced a typical leukemia with involvement of the erythropoietic system in 20% of the animals after a latent period of 6-8 months. (German)  
G. W. CAMPBELL

KOSSEY, P

SVEJDA, Jeroslav; KOSSEY, Peter; HLAVAYOVA, Elena; SVEC, Frantisek

Histological picture of the transplantable rat leukaemia induced by X-irradiation and methylcholanthrene. Neoplasma, Bratisl. 5 no.2: 123-131 1958.

1. Oncological Research Institute, Bratislava Patho-Anatomical Institute, Faculty of Medicine, Masaryk University, Brno. Authors' address: Dr. J. Svejda, Brno, Pekarska 53; Dr. P. Kossey, Dr. Hlavayova, Dr. F. Svec, Bratislava, ul. Cs. armady 17.

(LEUKEMIA, EXPERIMENTAL,  
methylcholanthrene & x-ray induced in rats)  
(METHYLCOLANTHRENE, effects,  
exper. leukemia in rats)  
(ROENTGEN RAYS, effects,  
same)

ORAVEC, C.; SMIDOVA-KOVAROVA, V.; KOSSEY, P.

Heterotransplantation of tumours--Part II. Heterotransplantation of Walker 256 carcinoma in hamster treated with cortisone, antigen, Antiserum and zymosan. Neoplasma, Bratisl. 6 no.3:262-267 1959.

1. Oncological Research Institute, Bratislava, CSR.  
(NEOPLASMS transpl.) (CORTISONE pharmacol.)  
(ANTIGENS pharmacol.) (IMMUNE SERUMS pharmacol.)

CERVENANSKY, J.; KOSSEY, P.

Ewing's sarcoma. Neoplasma, Bratisl. 6 no.3:327-335 1959.

1. Orthopedic Clinic, Faculty of Medicine, Komensky University,  
Bratislava Oncological Research Institute, Bratislava, CSR.  
(SARCOMA EWING'S)



ORAVEC, G.; SMIDOVA-KOVAROVA, V.; KOSSEY, P.

Heterotransplantation of tumours Part III. Viability of cells of the Ehrlich Ascites mouse tumour hetero-transplanted to adult rats treated and non-treated with cortisone, in the anterior eye chamber, subcutaneously and intraperitoneally. Neoplasma, Bratisl. 6 no.4:390-394 1959.

1. Oncological Research Institute, Bratislava  
(NEOPLASMS exper.)  
(EYE neopl.)  
(CORTISONE pharmacol.)

CHERVENYANSKIY, Ya. [Chervenansky, J.]; KOSSEY, P.

Ewing's sarcoma. Ortop.travm. i protez. 20 no.6:27-31 Je '59.

(MIRA 13:3)

1. Iz ortopedicheskoy kliniki (zaveduyushchiy - chlen-korrespondent Slovatskoy akademii nauk Ya. Chervenyan'skiy) meditsinskogo fakul'teta Universiteta im. Komenskogo i Onkologicheskogo issledovatel'skogo instituta (zaveduyushchiy - chlen-korrespondent Slovatskoy akademii nauk V. Turzo), Bratislava.

(SARCOMA, EWING'S, surg. (Rus))

ORAVEC, G.; SMIDOVA-KOVAROVA, V.; KOSSEY, P.

Hetero-transplantation of Walker 256 carcinoma in hamsters  
previously treated with cortisone, antiserum and zymosan.  
Neoplasma, Bratisl. 7.no.1 suppl:50-51 '60.

(NEOPLASMS exper)  
(CORTISONE pharmacol)  
(IMMUNE SERUMS pharmacol)  
(POLYSACCHARIDES pharmacol)

WINKLER, A.; UJHAZY, V.; CERNY, V.; SANDOR, L.; KOSSEY, P.

Effect of the spleen on the inhibition and course of certain experimental leukemias in rats treated with chloralkylamine. Neoplasma, Bratisl. 7 no.1 suppl:144-146 '60.

1. Vyskumny ustav onkologickeho, Bratislava.  
(LEUKEMIA exper)  
(ANTINEOPLASTIC AGENTS pharmacol)  
(SPLEEN physiol)

SMIDOVA-KOVAROVA, V.; ORAVIC, C.; BAZANY, M.; KOSSEY, P.

Heterotransplantation of tumours. Part IV. Heterotransplantation of Walker 256 rat carcinoma in hamsters treated with cortisone in combination with normal rat organs antigen and with tumour antigen. Neoplasma, Bratisl. 7 no. 2: 167-171 '60.

1. Oncological Research Institute, Bratislava, C.S.R.  
(NEOPLASMS exper)  
(CORTISONE pharmacol)

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Experimental contribution to the problem of the pathogenesis  
of pulmonary cancer. Neoplasma, Bratisl. 8 no.1:27-39 '61.

1. Institut für Arbeitsmedizin and Berufskrankheiten, Onkolo-  
gisches Forschungsinstitut, Bratislava, Tschechoslowakei.  
(LUNG NEOPLASMS exper)

HLAVAYOVA, E.; KOSSEY, P.; SMIDA, J.; SVEC, F.

Further experiments with a leukaemogenic inducer present in BS tumour.  
Neoplasma 9 no.5:457-463 '62.

1. Oncological Research Institute, Bratislava, CSSR.  
(NEOPLASMS, EXPERIMENTAL) (LEUKEMIA, EXPERIMENTAL)

KOSSEY, P.; KLAUBER, E.

Histological diagnosis by means of quick frozen sections in  
gynaecological oncology. Neoplasma 9 no.5:477-484 '62.

1. Oncological Research Institute, Bratislava, CSSR.  
(GYNECOLOGIC NEOPLASMS) (HISTOLOGICAL TECHNIQS)



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Aneurysmal bone cysts. Bratisl. Lek. Listy 42 no.8:465-478 '62.

1. Z Ortopedickej kliniky Lek. fak. Univ. Komenskeho v Bratislave, veduci clen korezp. SAV prof. MUDr. J. Cervenansky, a z Vyskumneho ustavu onkologickeho v Bratislave, riaditel clen korezp. SAV doc. MUDr. V. Thurzo.

(BONE CYST)

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Some problems of bone oncomorphology. Acta chir. orthop. traum.  
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New method for visualizing individual cells in microorganism.

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Phacidiosis of pine in Siberia and the conditions promoting this  
disease. Trudy TSSBS no.8:180-183 '64. (MIRA 18:7)

KOSSIRSKIY, Iosif Abramovich; PLOTNIKOV, Nikolay Nikolayevich

[Diseases of tropical countries; clinical manual] Bolezni  
zharkikh stran; klinicheskoe rukovodstvo. Moskva, Medgiz,  
1959. 530 p. (MIRA 13:2)

(TROPICS--DISEASES AND HYGIENE)

GODAL, A.; KOSSKY, P.

Histological evaluation of surgical material after extensive radical amputation of the breast for cancer. Neoplasma, Bratisl. 7 no.1:95-101 '60.

1. Oncological Research Institute, Bratislava, CSR.  
(MASTECTOMY)



CA

6

The polarographic determination of the stability constants of the complexes formed by some heavy metals with Schwarzenbach's complexones. J. Koryta and J. Kozáček (Charles Univ., Prague). *Collection Czechoslov. Chem. Commun.* 15, 241-50 (1950) (in English).—The rates of formation and decomposition of the complexes formed by nitrilotriacetic acid,  $N(CH_2COOH)_3(H_3L)$ , with Cd, Pb, and Zn are of such an intermediate character as to render impossible the calculation of their stability constants ( $K$ ) by the usual polarographic technique with a dropping Hg electrode. The waves obtained at such an electrode have a partially kinetic character. By means of a modified streaming Hg electrode and conventional current-potential recording, the kinetic contribution to the current can be eliminated and the  $K$  calculated under various conditions of ionic strength ( $\mu$ ) and pH. The logs of the values of  $K$  for the reaction,  $M^{2+} + L^{3-} \rightleftharpoons ML$ , are (1) for  $Cd^{2+}$ : 9.16 at  $\mu 0.1$ , 8.85 at 0.2, and 8.61 at 0.3; (2) for  $Pb^{2+}$ : 10.68 at  $\mu 0.2$ ; and (3) for  $Zn^{2+}$ : 10.35 at  $\mu 0.2$ . Only values of  $K$  up to  $10^{10}$  can be determined by the technique. Consequently, the values of  $K$  for the more stable complexes of Cd, Zn, and Pb with ethylenediaminetetraacetic acid could not be determined. P. J. Elving

C 19

4

Limiting currents due to solution of amalgams. I. Kössler (Charles Univ., Prague). *Collection Czechoslov. Chem. Commun.* 15, 723-33(1950) (in English).—The limiting polarographic current due to the soln. of a metal from a dropping-amalgam electrode is  $i_d = kch^{1/2}$ , where  $c$  is the concn. of metal in the amalgam and  $h$  the effective pressure. The current is not affected by the concn. of supporting electrolyte, but the potential at which the limiting current is reached depends on the nature of the soln. In some cases (Cd and Pb amalgams) double anodic waves are secured. The ratio of the heights of such waves and their  $E_{1/2}$  values depend on the amalgam concn., the drop time, and the direction in which the potential is changed. L. M.

CA

7

Determination of butanol and dibutyl ether in butyl methacrylate. J. Kössler and J. Vodehnal (Charles Univ., Pragui, Czech.). *Chem. Listy* 45, 87-8(1951).— Infrared spectroscopy was used for the detn. of BuOH and Bu<sub>2</sub>O in CH<sub>2</sub>C(Me)CO<sub>2</sub>Bu. M. Hudlický

1951

C. a.  
1951

**Analysis of a mixture of chloroethoxysilanes.** Ivo Kossler and Josef Vachal (Charles Univ., Prague, Czechoslovakia) *Chem. Listy* 45, 100-12 (1951). Infrared max. absorption bands of chlorotriethoxysilane, dichlorodiethoxysilane, and trichloroethoxysilane were measured. Analysis of binary and ternary mixts. of the 3 chloroethoxysilanes was carried out in a CS<sub>2</sub> soln. on the basis of infrared extinction. M. Hudlicky

KOSSELER, I.

5

✓ Analysis of a mixture of cresols in the presence of phenol:  
I. Kosseker and I. Vodehnal (Charles Univ., Prague).  
*Journal of Practical Chemical Anal., Czechoslovakia* 1, 367-72  
(1952) (Pub. 1953).—PhOH and *o*-, *m*-, and *p*-cresol can be  
determined in their mixtures by infrared spectrography. The wave-  
numbers used for a low PhOH content were 762, 780, 820, and  
1075  $\text{cm}^{-1}$ , for a high PhOH or *o*-cresol content, 760, 820,  
1075, and 1030  $\text{cm}^{-1}$ . H. Newcombe

(2) 1/11/57

KOSCHKA, I.; FAYERN, B. "Application of powder analysis in the quantitative infrared spectroscopy."  
Chemické zvesti, Bratislava, Vol 6, No 2, Feb 1952, p. 99

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

KESLER, I. G.  
Radiophysics

Dissertation: "Some Questions on the Theory and Calculation of Frequency-Phase Detectors." Cand Tech Sci, Moscow Electrical Engineering Inst of Communications, 8 Apr 1954. (Vechernyaya Moskva Moscow, 29 Mar 54)

SO:SUM 213, 20 Sep 1954

RUBIN, I.

"Use of infrared spectroscopy in macromolecular chemistry." Ceskosloveska Morfologie, Praha  
Vol. 48, No. 5, May 1954, p. 784.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.



KOSSLER, IVO

4

V. Automatically regulated laboratory fractionating columns.  
Ivo Kossler (Czech. akad. věd, Prague). *Chem. Listy* 49, 447-448 (1954). An arrangement of fully automated distillation apparatus is described. The column insulating jacket for the column and its head allows distn. over the range of  $-20^{\circ}$  to  $250^{\circ}$ . Distn. curves can be registered automatically and the reflux ratio automatically adjusted according to the transition from one component to the other. Heating of the columns automatically follows the temp. of the distg. liquid; heating of the flask keeps a const. distn. rate. The pressure is maintained within  $\pm 0.2$  mm. Hg. The distn. is automatically shut off when all the liquid is evapd. or when cooling is insufficient. The schemes are given. M. Hudlicky.

Kossler, Ivo

8

Quantitative analysis by infrared spectroscopy. Ivo  
Kossler (Czech. akad. věd, Prague). *Chem. Listy* 49,  
1944-55 (1955).—A review with 17 references.  
M. Hudlický

50-4

18 2/24

KOSSLER, I.

Czechoslovakia

Neuere Entwicklung auf dem Gebiet der Theorie und Praxis der Hochpolymeren

(Hauptjahrestagung 1956 der Chemischen Gesellschaft in der Deutschen Demokratischen Republik

Aus dem Tagungsprogramm - Nachmittags: Gruppe C:

Dr. B. Matyska, I. KOSSLER und V. ŠRAIER (Vorgetr. von B. MATYSKA), Prag, "Polymerization von Methakrylsaurebutylester in Substanz."

SOURCE: Plaste u Kautschuk, October 1956, Unclassified.

KESLER, I.

1975. 3044 PROBLEMS IN THE THEORY OF A RATIO 621.376.33  
 DETECTOR. Kealer. 2  
 Arch. elektrol. Ch. (Warsaw), Vol. 5, No. 4, 591-620 (1958). 1-4E1d  
 In Polish.

The compensation of variations in signal amplitude is explained and an analysis leading to quantitative results is described. The effect of variation in parameters on the behaviour of the system is examined. Compensation is achieved by unequal input impedances of diode detector. To simplify the analysis a quasi-stationary method is applied. The variation in efficiency of detection and direct voltage component only are considered since other parameters such as ageing of valves and resistors and variation in input signal may be reduced to these two. It is shown that the voltage limit for stable operation of the system coincides with the practical limit for a realisable compensated state. The experimental data are given.

M. W. Makowski

amb

KOSSLER, I.

"Apparatus for laboratory distillation."

p. 292 (Chemicky Prumysl) Vol. 7, no. 6, June 1957  
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,  
April 1958

CZECHOSLOVAKIA / High Polymer Chemistry. J. Polym. Sci. Polym. Chem. Ed. 1958, 16, 2287-2294.

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 80112.

Author : Matyska, B., Kossler, I., Srajer, V.

Inst : Not given.

Title : The Kinetics of Polymerization of n-Butyl Methacrylate.

Orig Pub: Chem. listy, 1957, 51, No 12, 2287-2294.

Abstract: The kinetics of block polymerization of n-butyl methacrylate (I) was investigated. The polymerization was initiated by a thermal decomposition of benzoyl peroxide. The rate constants of individual processes were determined. The values found for the block polymerization of I differ insignificantly from the corresponding values for methyl methacrylate. The presence of a

Card 1/2

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 80112.

Abstract: butyl ester of alpha hydroxy butyric acid weakly effects the polymerization of I; the presence of n-butyl alcohol, isobutyl alcohol and dibutyl ether slows down the reaction rate (up to 10% when 5% of the additive was introduced). The presence of isobutyl alcohol has a great effect upon the rate of polymerization. Water does not influence the polymerization rate until ~15% of conversion. The rate of reaction is constant until the polymerization reaches 40%, thereafter rising rapidly. The process of polymerization was found to lack an explosive nature.

Card 2/2

END  
123

KOSSLER, I.

Distri: 4E2c(j)/4E3b/4E3d

1 ✓ The phenomenon of "inversion" in thermal diffusion of high polymer solutions. I. Kossler and I. Krejsa (Czechoslovak Acad. Sci., Prague). *J. Polymer Sci.* 29, 69-75 (1958).—In the study of thermal diffusion of high polymers in a solvent, instruments are commonly used which have a lower and upper chamber. The thermal diffusion effect causes an increase of concn. in the lower chamber and, conversely, a decrease in the upper one. Simultaneous changes in the av. mol. wts. occur in both chambers, and, in agreement with theory, the av. mol. wt. in the lower chamber increases. The av. mol. wt. 1st increases in the upper chamber, reaches a max., and then decreases to values even below the initial value. The opposite occurs in the lower chamber. This phenomenon of "inversion" must be taken into account in studying the applicability of thermal diffusion relations for obtaining distribution curves.

3  
 2-BW(BW)(JLW)  
 2-JAIC(NOC(MAY))  
 3

PHASE I BOOK EXPLOITATION

CZECH/5517

Kössler, Ivo, Doctor of Natural Sciences, Candidate of Chemical Sciences

Infračervená spektroskopie v chemické analýze (Infrared Spectroscopy in Chemical Analysis) Prague, SNTL, 1960. 196 p. Errata slip inserted. (Series: Moderní metody v chemické laboratoři, sv. 1) 1,200 copies printed.

Reviewer: Josef Plíva, Doctor of Engineering, Doctor of Chemical Sciences; Chief Ed.: Adolf Balada, Doctor; Resp. Ed.: Marie Školová, Graduate Chemist.

PURPOSE: This handbook is intended for workers in the chemical industry and in chemical research concerned with organic synthesis, petroleum, synthetic materials, paints and lacquers; for workers in the food and pharmaceutical industries; and for related departments of schools of higher education.

COVERAGE: The book deals with the practical applications of infrared spectroscopy in chemical analysis. Fundamentals of infrared spectroscopy, qualitative analysis (identification of substances, analysis of mixtures, and determination of the purity of substances), quantitative analysis (the light balance, diffusion of light in the instrument, measurement and calculation methods), and infrared

Card-1/7

Infrared Spectroscopy in Chemical Analysis

CZECH/5517

APPROVED FOR RELEASE: 06/14/2000

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spectroscopy combined with separation methods (rectification, chromatography, and fractional crystallization) are discussed. Experimental technique, including a description of instruments and how to use them, the preparation of specimens and examples of analysis, and the documentation of spectra, is examined. The author states that the book fills the need for a systematic summary and treatment of methods of analysis and is not intended as a textbook on infrared spectroscopy or an assembly of data from published works on analysis. The symbols most common in the field are used, though some of them contradict the recommendations of the International Commission on Spectroscopy. J. Dvorak, Doctor of Natural Sciences, is mentioned for his help. There are 193 references: 159 English, 9 Czech, 10 German, 4 Soviet, 4 French, 2 Swedish, 2 Swiss, 2 Belgian, and 1 Dutch.

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Ch. I. Origin of Spectra, Infrared Radiation, and the Infrared Spectra	9
1. Origin of spectra	9

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Z/009/60/000/011/001/001  
E112/E153

AUTHORS: Dolejšek, Z, Grubner, O, Hanuš, V, Kössler, I,  
Matyska, B, and Vodehnal, J.

TITLE: Analytical Control of Isoprene Rectification

PERIODICAL: Chemický průmysl, 1960, No. 11, pp. 571 - 575

TEXT: For the stereoscopic polymerization of isoprene, monomers of sufficiently high quality are essential. Purification of isoprene on a large scale is carried out by distillation processes. Technical isoprene contains various saturated and unsaturated hydrocarbons with 4, 5 or 6 carbons. Separation is accomplished by azeotropic distillation, adding acetaldehyde, propylene oxide, methyl formate, methanol, isopentane, isopropylamine, acetone, water or aqueous acetone as azeotropic agent. As the literature does not contain sufficient data about the boiling points of the different mixtures the authors have undertaken a study of the normal rectification of isoprene on efficient columns and have followed the concentrations of the different components in the various cuts. The effect of water and methyl alcohol as azeotropic agents was also considered.

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Z/009/60/000/011/001/001  
E112/E153

### Analytical Control of Isoprene Rectification

Two types of isoprene from different sources were investigated: 1) Soviet material, with 96% isoprene content, and 2) Czechoslovak material, prepared from isobutylene and formaldehyde, with 13% isoprene. The different distillation fractions were analysed by mass spectrography, infrared spectroscopy and gas chromatography, using thermoconductivity cells for detection. A chromatogram of sample B (Czechoslovak), e.g. first sample of condensate from still-head is shown (Fig.1), revealing 8 peaks and identified as follows: 1) isobutylene, not isolated in pure state but found in one fraction in an amount of 15% together with 85% 3-methylbutene-1; 2) and 3), peaks appertaining to butene-1 and butene-2 (confirmation of structure through mass spectrography); 4) 3-methylbutene-1 (this compound was isolated from one fraction in 99.5 purity and identified spectroscopically by comparison with data in the literature; 5) 2-methylbutene-1 (this compound was identified by comparison with literature data. It was obtained by fractional distillation in approximately 80% purity. It was also obtained by preparative

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E112/E153

Analytical Control of Isoprene Rectification

gas chromatography, and both samples proved identical);  
6) isoprene: standard prepared by fractional distillation in  
99.98% purity and by preparative chromatographic method (ethyl  
cyclopentanecarboxylate as stationary phase); 7) 2-methylbutene-2  
prepared by fractional distillation in 98% purity (identified by  
method used for 3-methylbutene-1; compound prepared for  
identification purpose also by preparative gas chromatography).  
Chromatogram of sample A (Soviet isoprene) revealed similar  
characteristics. A special peak (4b) was noticed, the identity  
of which was not yet determined. Results of practical  
distillation tests were as follows. Sample A was distilled over  
a low-efficiency column with reflux ratio 13:1. Pentene  
contents were reduced from 4 to 1.2%, and isoprene of 98.8% purity  
and in yields of 80% was collected. Using a more efficient column  
with reflux ratio 40:1 equilibrium was established after 2 hours  
and isoprene of 99.98% purity was obtained in poor yields. ✓  
Attempts to improve yields by the addition of azeotropic agents  
(methanol, water) failed. Distillation of sample B was undertaken  
Card 3/6

Z/009/60/000/011/001/001  
E112/E153

Analytical Control of Isoprene Rectification

over a column with reflux ratio 4:1. The concentration of isoprene in the middle fraction was doubled and the distillate contained only four components: 3-methylbutene-1; 2-methylbutene-1; isoprene; 2-methylbutene-2. A further fractionation over a column with reflux ratio 25:1 yielded further fraction, from which only those containing 2-methylbutene-1, isoprene and 2-methylbutene-2 were collected. Distillation of the three combined fractions over a column with reflux ratio 40:1 gave a two-component mixture in which the pentene concentration amounted to only 13%. By azeotropic distillation with acetone, conversion into high-grade isoprene could be achieved. It is claimed that yields were satisfactory. Acknowledgements are made to Doctor J. Pech, director, VÚSK Gottwaldov for useful advice and for supplying some of the raw materials. There are 6 figures, 4 tables and 16 references (including several patents to one reference): 11 English, 4 Czech and 1 Soviet.

ASSOCIATION: Ústav fyzikální chemie ČSAV, Praha (Institute for  
Card 4/6 Physical Chemistry, ČSAV Prague)

SUBMITTED: June 6, 1960

Z/009/60/009/011/001/001  
E112/E153

Analytical Control of Isoprene Rectification

Obr. 1  
*Chromatografické  
spektrum isoprenu B*

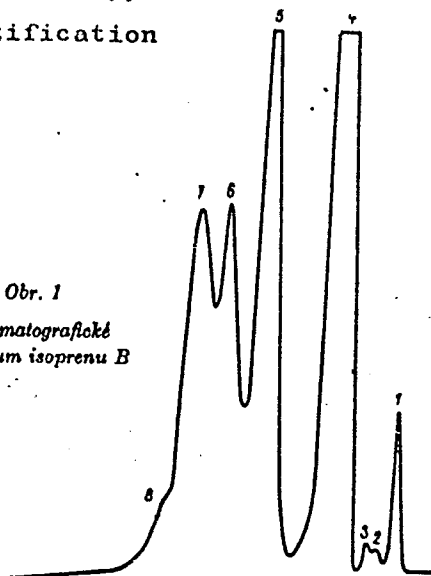


Fig.1

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E112/E153

Analytical Control of Isoprene Rectification

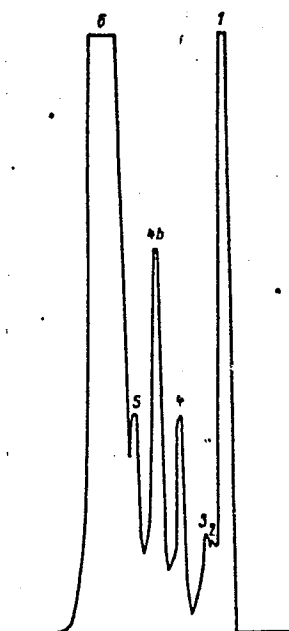


Fig.4

Card 6/6

KOSSLER, I.

Distr: 4E2c(j)/4E3d

✓ Thermodiffusion distribution curve of polychloroprene.  
 Ivo Kossler and Milan Stolka (Czech. Acad. Sci., Prague).  
*J. Polymer Sci.* 44, 113-22 (1960).—Polychloroprene solns.  
 were fractionated in a variety of thermodiffusion cells to  
 qual. evaluate some factors affecting the degree of sepn.  
 Fractionation of a 51-g. sample of polychloroprene in 100  
 ml. benzene,  $[\eta] = 1.14$ , in a 2-reservoir app. with an 0.5  
 mm. wide diffusion chamber having a horizontal temp. gradi-  
 ent of  $700^\circ/\text{cm}$ . gave a reduced partition coeff.  $\gamma = (c_1/c_2)$   
 $-1$  of 12 at equil., where  $c_1$  and  $c_2$  are concns. in lower and  
 upper reservoirs, resp. The inversion phenomenon ob-  
 served (*ibid.* 29, 69(1165)) for poly(butyl methacrylate) was  
 not found. Tests in a 5-reservoir app. showed minor inver-  
 sion in each cell during the first few hrs. Sepn. efficiency  
 was improved by decreasing the vol. of the lower cells, re-  
 ducing the horizontal temp. gradient in the lower part of  
 the diffusion chamber, and combining fractionation with  
 extn. into pure solvent. The sharpest fractionation, as  
 measured by integral distribution curves of wt. % polymer  
 vs. intrinsic viscosity, was obtained in a diffusion app. hav-  
 ing 23 syringe sampling points, a  $1600 \times 60 \times 0.3$  mm. dif-  
 fusion chamber, and no reservoirs. By filling the lower  
 part of the cell with benzene and the upper part with poly-  
 mer soln. and employing a programmed temp. gradient, an  
 integral-distribution curve was obtained having two inflec-  
 tion points similar to distribution curves obtained by frac-  
 tional pptn.

J. V. E. Hardy

3  
 1-BW(1314)  
 1-973 (V13)  
 2

ji  
 dw

Z/009/61/000/007/003/004  
E112/E135

AUTHORS: Dolejšek, Z., Grubner, O., Hála, E., Hanuš, V., and  
Kossler, I.

TITLE: Contribution to the purification and analysis of  
isoprene. II.

PERIODICAL: Chemický průmysl, 1961, No.7, pp. 361-363

TEXT: The production of polyisoprene requires the use of a monomer of highest purity. Distillation methods are suggested for the isolation of isoprene; it is stated that recovery processes will be successful if based on a thorough knowledge of vapor-liquid equilibrium data of the main components of technical isoprene. The present paper describes the determination of equilibrium data for mixtures of 2-methylbutene-1 (component 1), isoprene (component 2) and 2-methylbutene-2 (component 3). The above components were first purified and their mixtures then studied in a modified vapor-liquid equilibrium still, developed originally by D.T.C. Gillespie (Ref.2: Ind.Eng.Chem. A.E., 18, 575 (1946)). A diagram of the apparatus is shown in Fig.1 and the experimental procedure is described. (A - inlet tube, C - Cottrell pump,  
Card 1/6



Z/009/61/000/007/003/004  
E112/E135

Contribution to the purification and analysis of isoprene. II.

E - equilibrium chamber, CH - condenser, K, P - sample chambers, R - disengagement chamber, V - boiler). In operation, sample chambers K, P and boiler V are filled with a measured quantity of the hydrocarbon mixture and the boiling rate adjusted so as to maintain the steady pumping of liquid and vapour through the Cottrell tube. After allowing sufficient time of operation to ensure steady conditions within the apparatus, samples of the boiling liquid and condensed vapour are withdrawn from chambers K and P by means of a cooled syringe and collected in glass ampoules for analysis. Analytical data are tabulated which enable the calculation of the correlation between relative volatility and composition of the liquid phase. The equation for a binary system is as follows:

$$a_{12} = \frac{y_1}{x_1} \frac{x_2}{y_2} = \frac{1 + 0.102 x_2}{1 - 0.093 x_1} \quad (1)$$

$$a_{13} = \frac{y_1}{x_1} \frac{x_3}{y_3} = \frac{1 + 0.410 x_3}{1 - 0.291 x_1} \quad (2)$$

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E112/E135

Contribution to the purification and analysis of isoprene. II.

$$a_{23} = \frac{y_2}{x_2} \frac{x_3}{y_3} = \frac{1 + 0.180 x_3}{1 - 0.083 x_2} \quad (3)$$

where:  $x_1, x_2, x_3$  are molar fractions of components 1, 2 and 3 in the liquid phase;  $y_1, y_2, y_3$  are molar fractions of components 1, 2 and 3 in the vapour phase; and  $a_{12}, a_{13}, a_{23}$  the relative volatilities of the subscript components. Ternary systems follow the following equations:

$$a_{13} = \frac{y_1}{x_1} \frac{x_3}{y_3} = \frac{1 + 0.410 x_3 + 0.102 x_2}{1 - 0.291 x_1 - 0.083 x_2} \quad (4)$$

$$a_{23} = \frac{y_2}{x_2} \frac{x_3}{y_3} = \frac{1 + 0.180 x_3 - 0.093 x_1}{1 - 0.083 x_2 - 0.291 x_1} \quad (5)$$

The composition of the gaseous phase in equilibrium can be computed from the composition of the liquid phase by equations:

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E112/E135

Contribution to the purification and analysis of isoprene. II.

$$y_1 = \frac{a_{13} \frac{x_1}{x_3}}{1 + a_{13} \frac{x_1}{x_3} + a_{23} \frac{x_2}{x_3}} \quad (6)$$

$$y_2 = \frac{a_{13} (x_2 / x_3)}{1 + a_{13} \frac{x_1}{x_3} + a_{23} \frac{x_2}{x_3}} \quad (7)$$

$$y_3 = 1 - y_1 - y_2 \quad (8)$$

The authors conclude from Eqs. (1) to (5) that binary or ternary azeotropes are absent from the system isoprene : 2-methylbutene-1 and 2-methylbutene-2, although this is in disagreement with the finding of M. Lecat (Ref.7; Ann. Soc. Sci. Bruxelles, 63, 58 (1949)). The validity of the findings of the Czechoslovak authors was confirmed by practical distillation results, which will be utilized

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Z/009/61/000/007/003/004  
E112/E135

Contribution to the purification and analysis of isoprene. II.  
for the study of the economics of industrial isoprene recovery for  
the production of synthetic rubber.

There are 1 figure (diagram of Gillespie apparatus), 2 tables  
(results of analyses) and 9 references: 6 Czech, 2 English and  
1 French. The English language references read as follows:

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