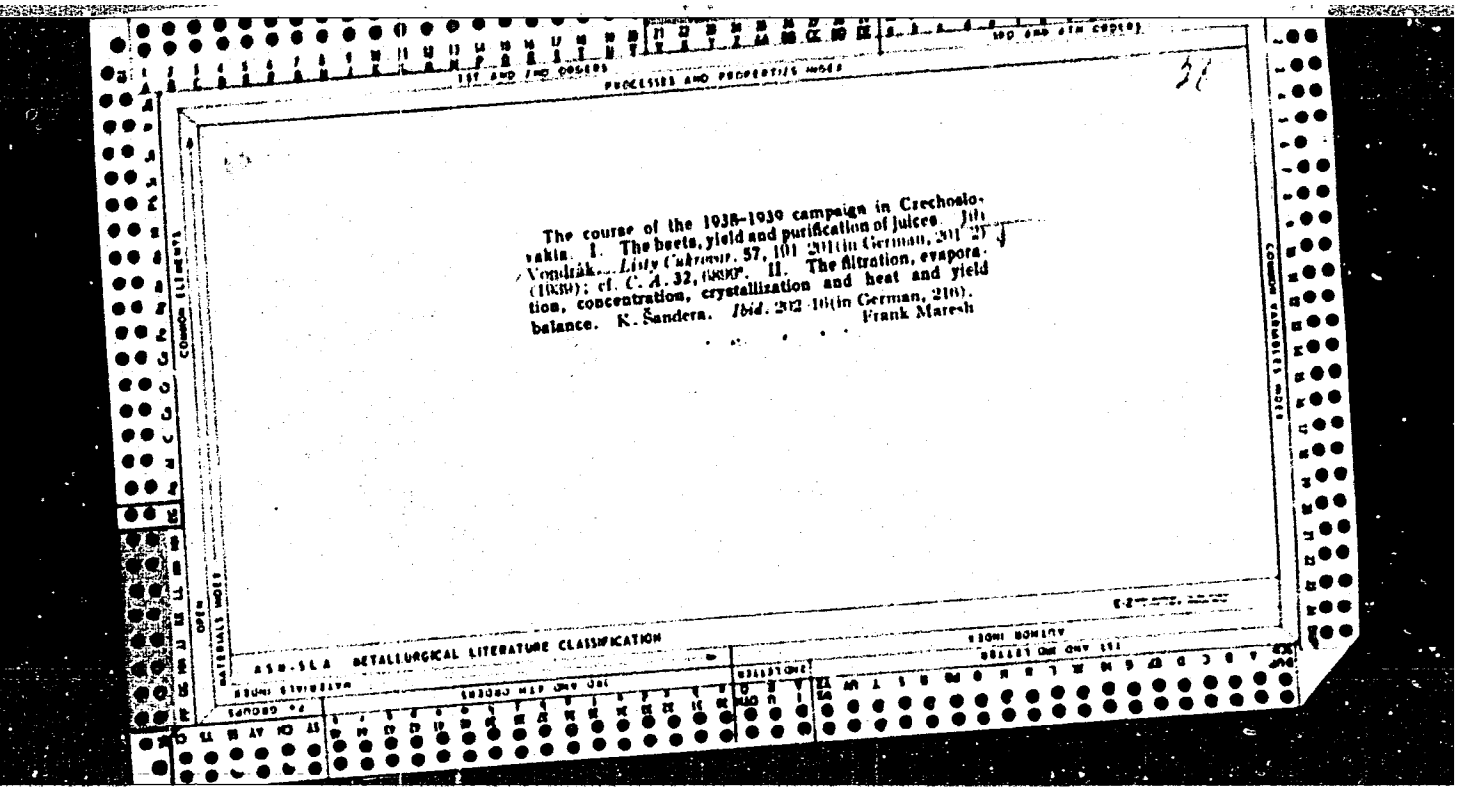
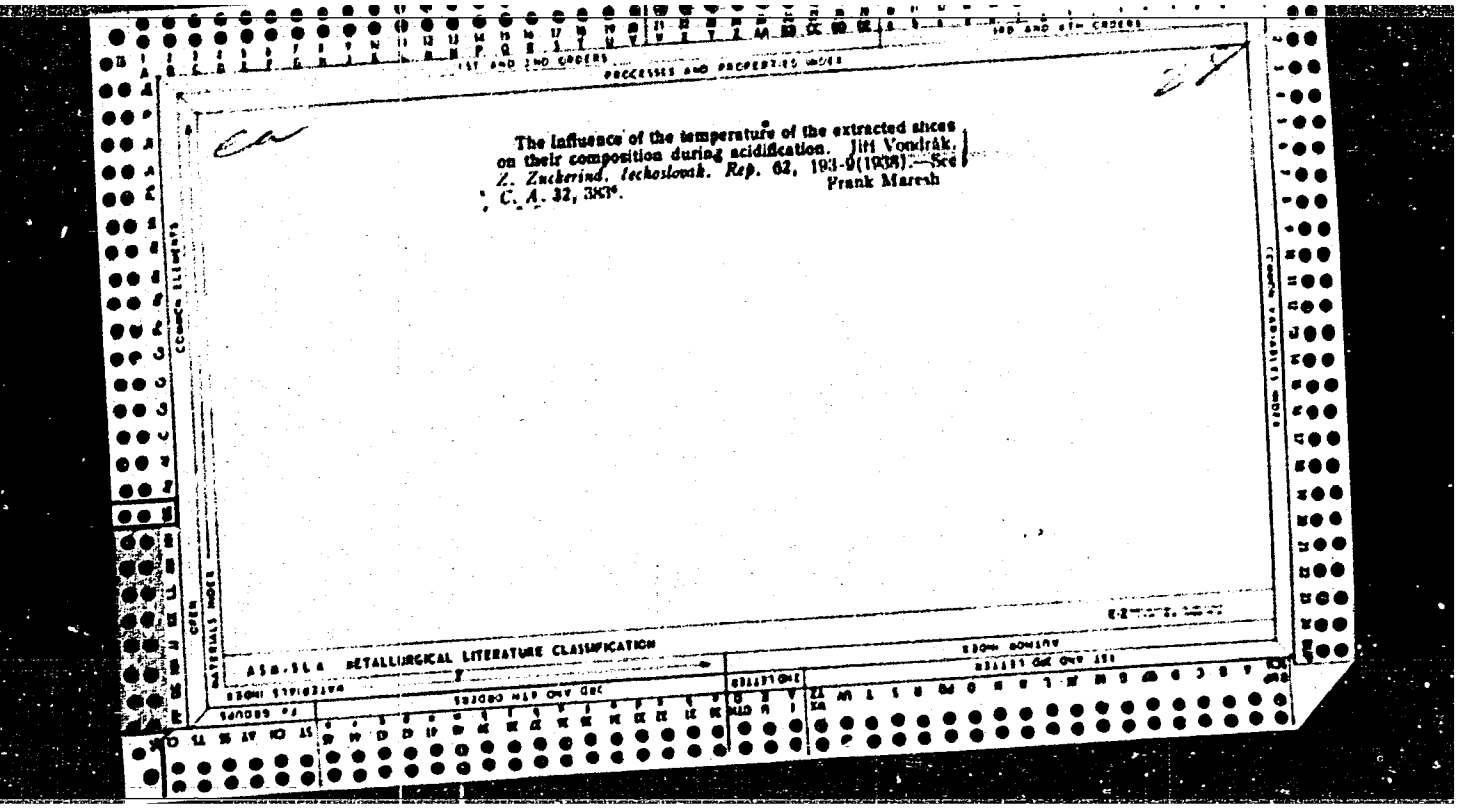
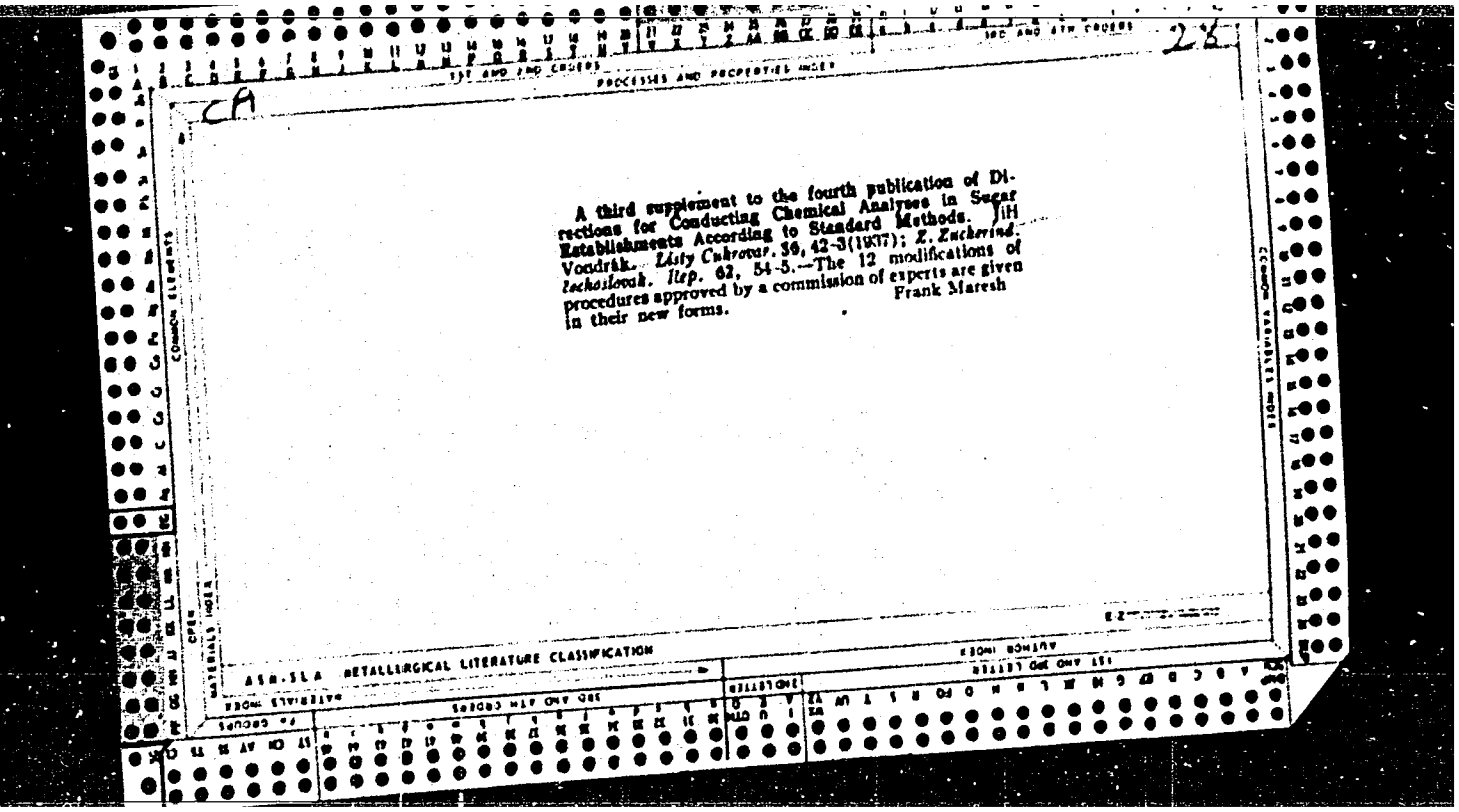


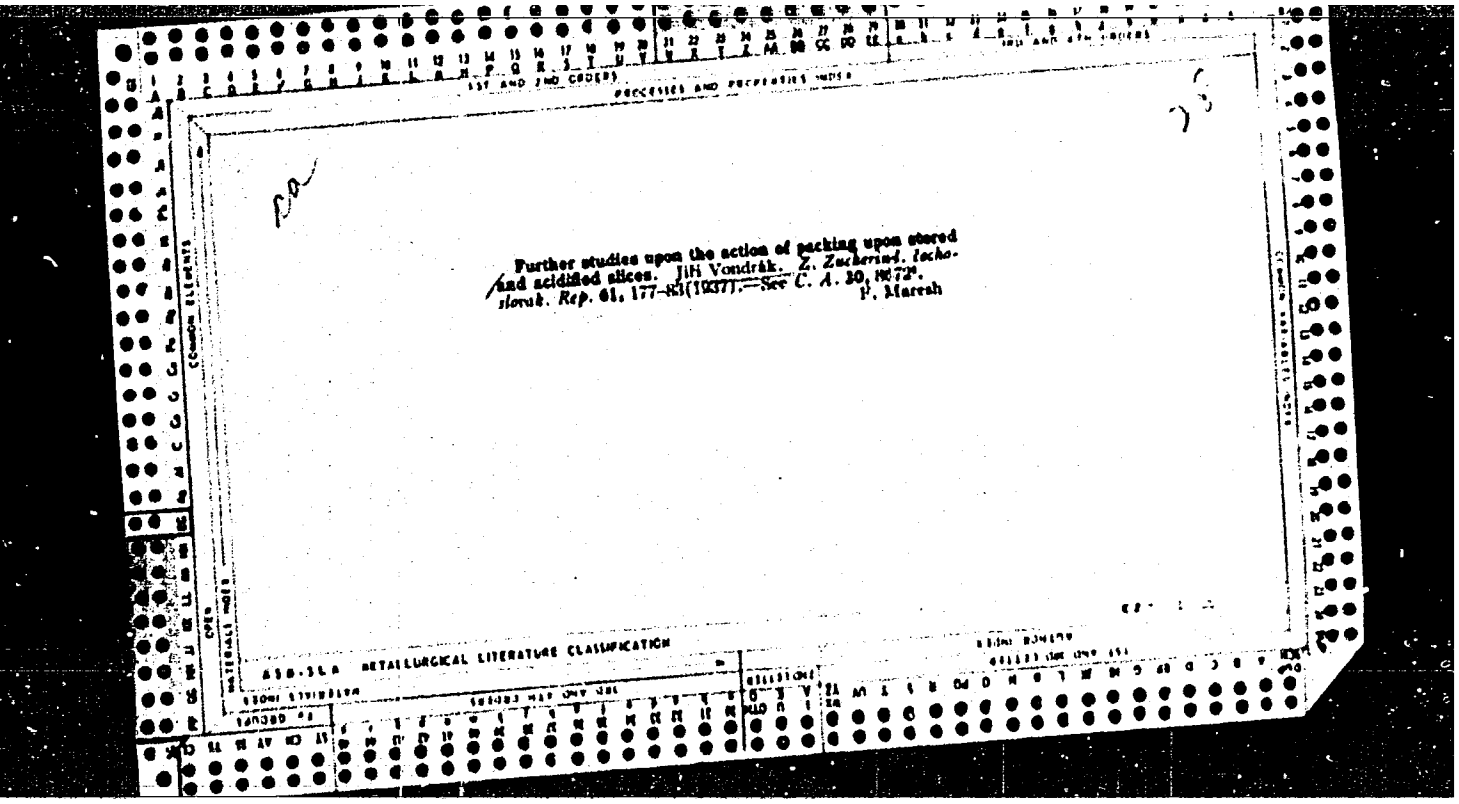
The course of the 1938–1939 campaign in Czechoslovakia. I. The beets, yield and purification of juices. Jiří Vondrák. *Listy Cukrovar.* 57, 101–2, 111 (in German, 211–27 (1939); cf. *C. A.* 32, 6899⁹. II. The filtration, evaporation, concentration, crystallization and heat and yield balance. K. Šandera. *Ibid.* 202–10 (in German, 210).
Frank Maresh



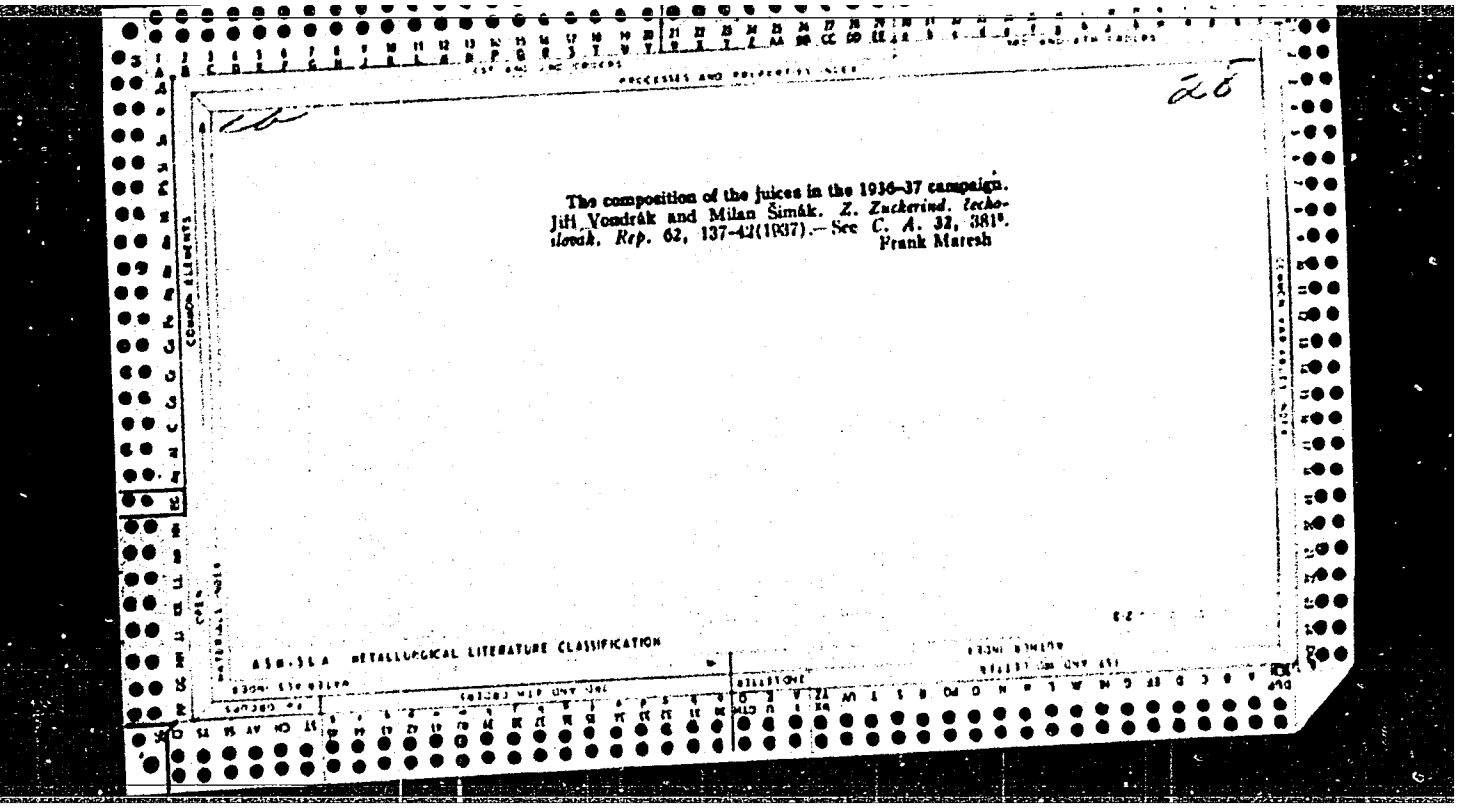
The influence of the temperature of the extracted slices on their composition during acidification. Jiří Vondrák. *Z. Zuckerind. Techoslovak. Rep.* 62, 193-9(1938).—See *C. A.* 32, 3879. Frank Mareš



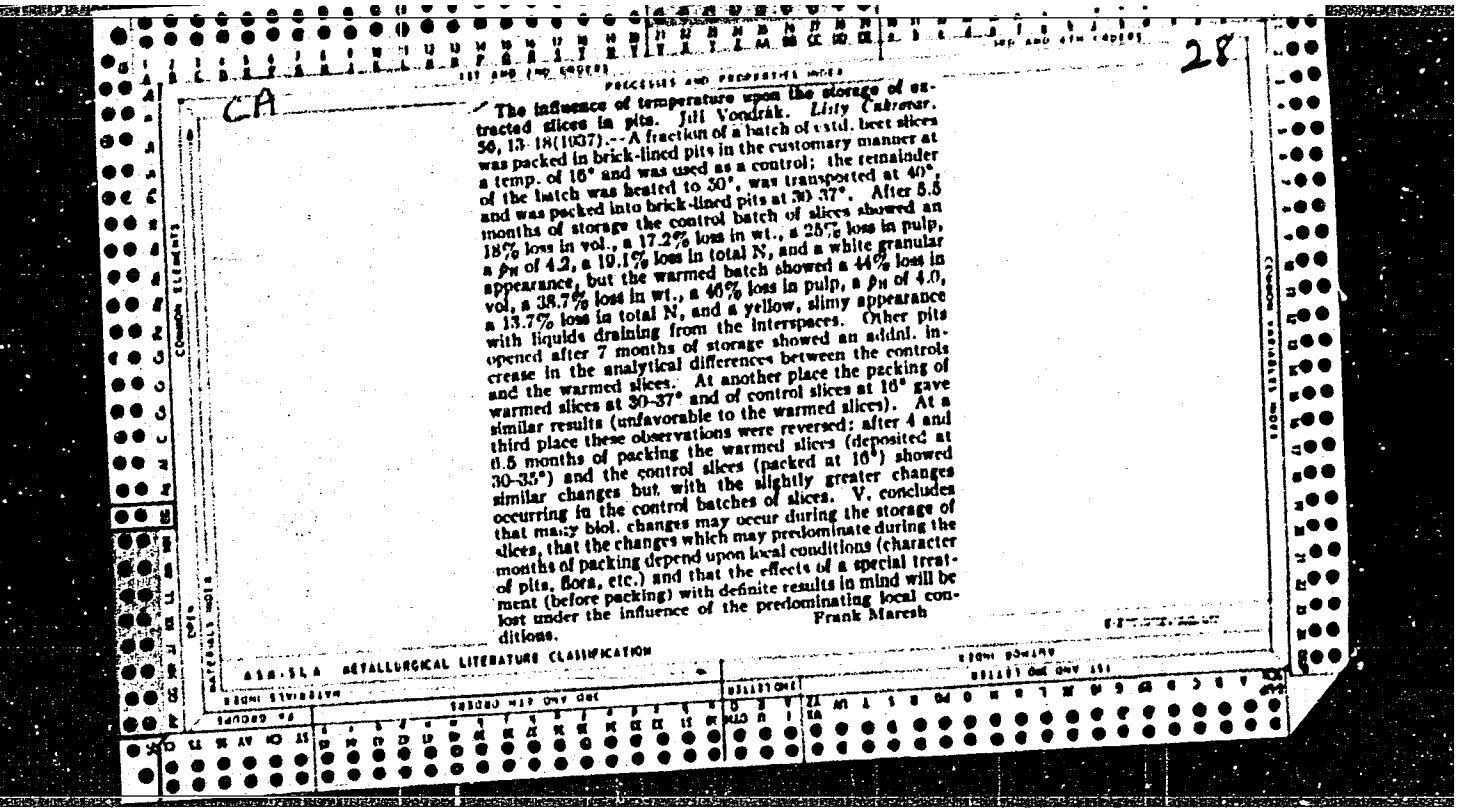
A third supplement to the fourth publication of Directions for Conducting Chemical Analyses in Sugar Establishments According to Standard Methods. VIH Vondrák. *Listy Cukrovar.* 59, 42-3(1937); *Z. Zuckerind. Tschechoslowak. Rep.* 62, 54-5.—The 12 modifications of procedures approved by a commission of experts are given in their new forms. Frank Maresh



Further studies upon the action of packing upon stored and acidified slices. JiH Vondrák. Z. Zuckerind. Tscho-slovak. Rep. 61, 177-83(1937).—See C. A. 30, 8072.
P. Maresh



The composition of the juices in the 1936–37 campaign. Jiří Vondrák and Milan Šimák. *Z. Zuckerind. Cechoslovak. Rep.* 62, 137–42(1937).—See *C. A.* 32, 3819. Frank Maresh



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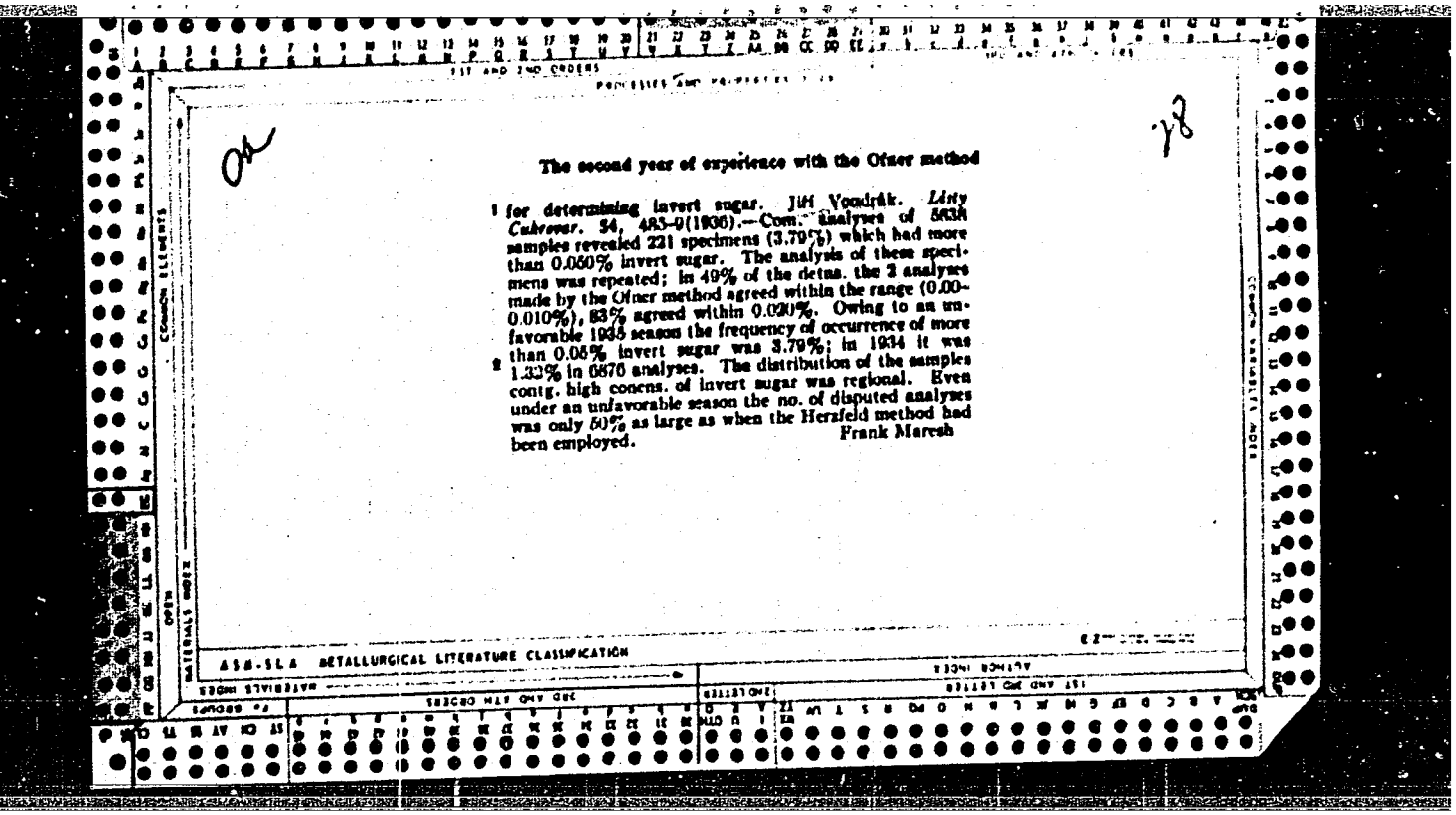
The influence of temperature upon the storage of extracted slices in pits. Jiří Vondrák. *Listy Cukrovar.* 56, 13-18(1937).--A fraction of a batch of cstd. beet slices was packed in brick-lined pits in the customary manner at a temp. of 16° and was used as a control; the remainder of the batch was heated to 30°, was transported at 40°, and was packed into brick-lined pits at 30-37°. After 5.5 months of storage the control batch of slices showed an 18% loss in vol., a 17.2% loss in wt., a 25% loss in pulp, a p_H of 4.2, a 19.1% loss in total N, and a white granular appearance, but the warmed batch showed a 44% loss in vol, a 38.7% loss in wt., a 46% loss in pulp, a p_H of 4.0, a 13.7% loss in total N, and a yellow, slimy appearance with liquids draining from the interspaces. Other pits opened after 7 months of storage showed an addnl. increase in the analytical differences between the controls and the warmed slices. At another place the packing of warmed slices at 30-37° and of control slices at 16° gave similar results (unfavorable to the warmed slices). At a third place these observations were reversed: after 4 and 6.5 months of packing the warmed slices (deposited at 30-35°) and the control slices (packed at 16°) showed similar changes but with the slightly greater changes occurring in the control batches of slices. V. concludes that many biol. changes may occur during the storage of slices, that the changes which may predominate during the months of packing depend upon local conditions (character of pits, flora, etc.) and that the effects of a special treatment (before packing) with definite results in mind will be lost under the influence of the predominating local conditions.

Frank Maresh



The second year of experience with the Ofner method

for determining invert sugar. Jiří Vondrák. *Listy Cukrovar.* 54, 485-9(1936).—Com. analyses of 5638 samples revealed 221 specimens (3.79%) which had more than 0.060% invert sugar. The analysis of these specimens was repeated; in 49% of the detns. the 2 analyses made by the Ofner method agreed within the range (0.00–0.010%), 83% agreed within 0.020%. Owing to an unfavorable 1935 season the frequency of occurrence of more than 0.06% invert sugar was 3.79%; in 1934 it was 1.33% in 6870 analyses. The distribution of the samples contg. high concns. of invert sugar was regional. Even under an unfavorable season the no. of disputed analyses was only 50% as large as when the Herzfeld method had been employed.

Frank Maresh

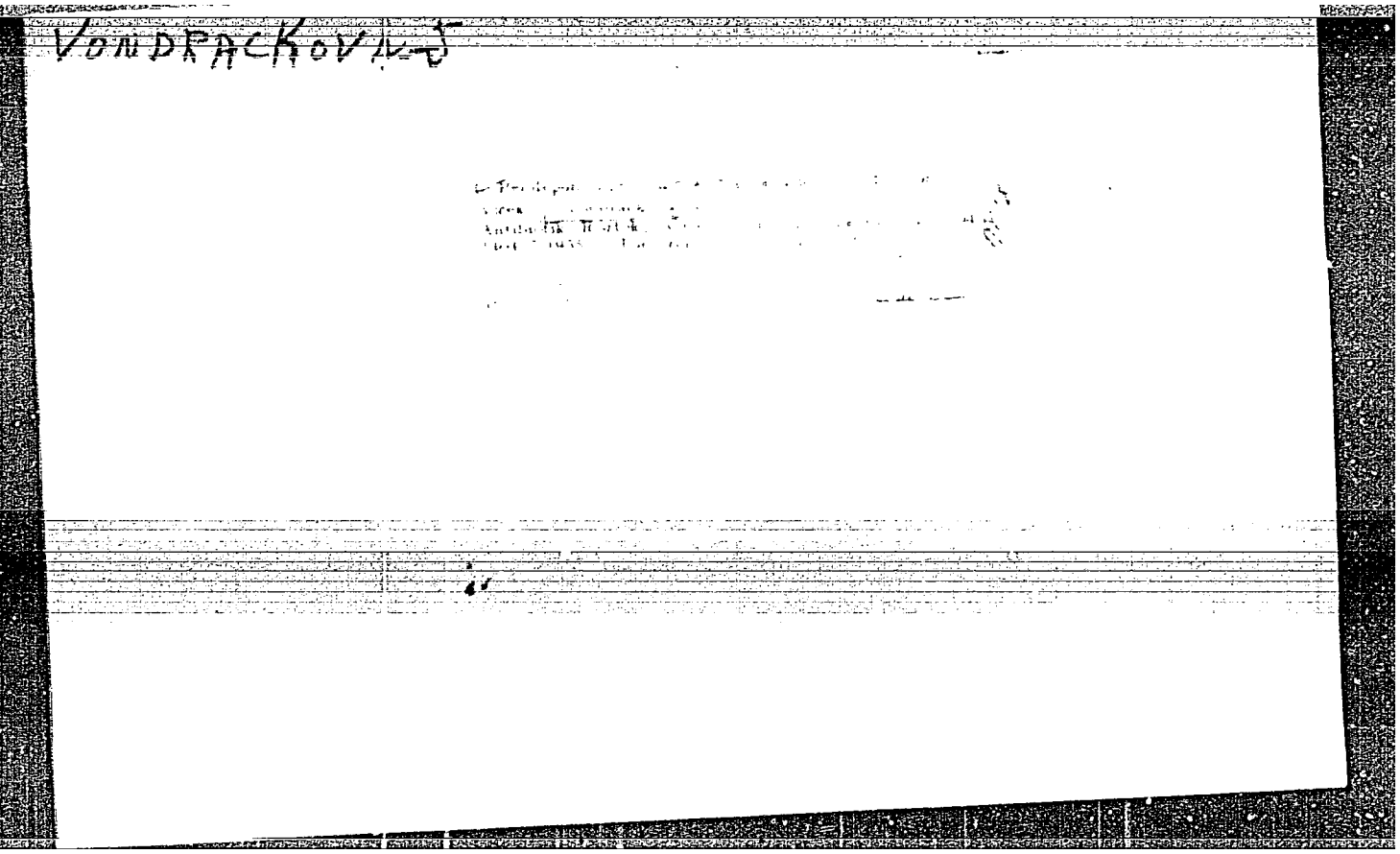
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

VONDRAKOVA, I.

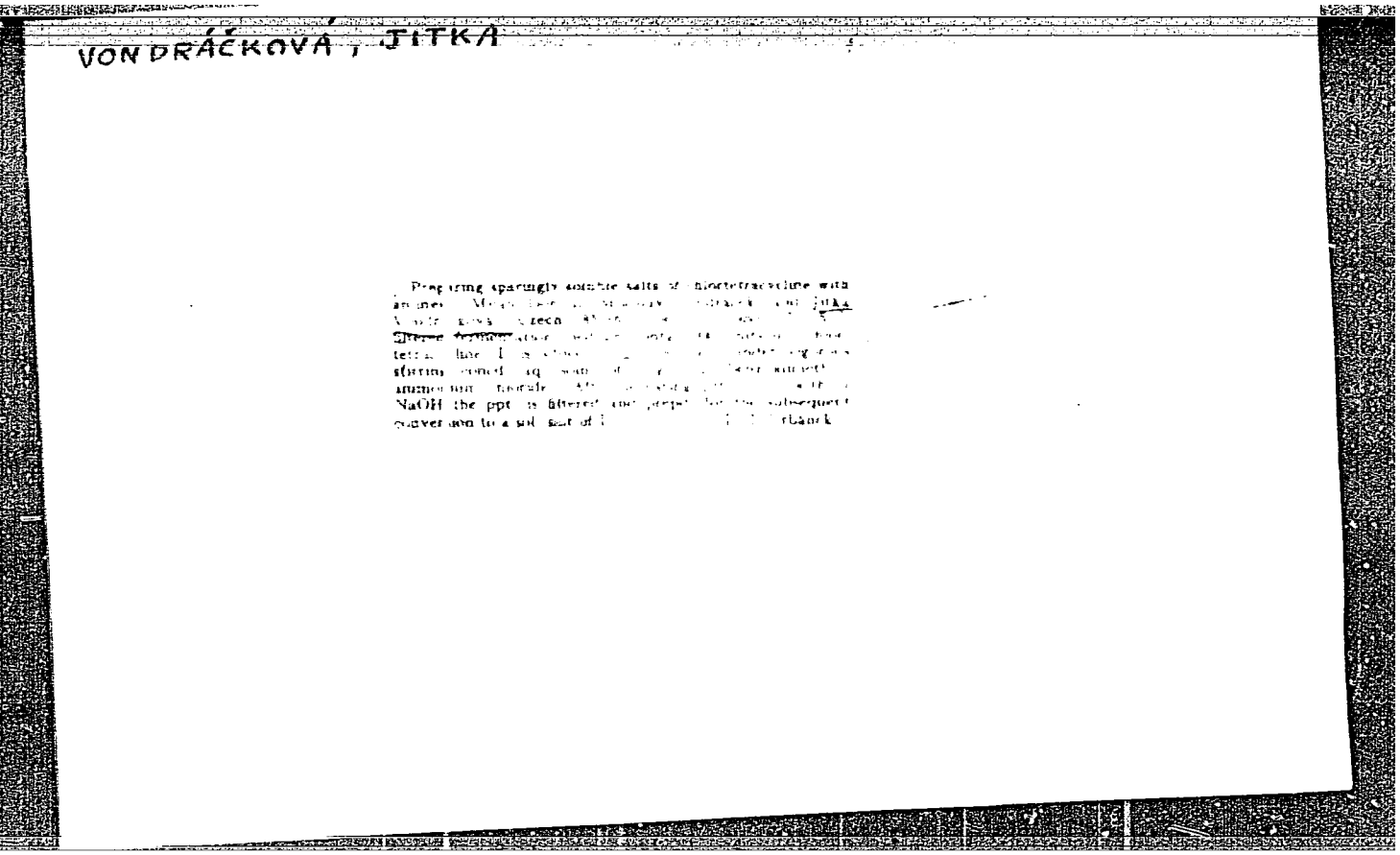
ELEFANT, E.; NEJEDLA, Z.; VONDRAKOVA, I.

Organization of wards for newborn; care of premature. Pediat. listy 6 no.3:182-184. May-June 1951. (CIML 20:11)

1. Of the Institute of Care for Mother and Child in Prague-Podole (Director — Prof. J. Trapl), Head of the Pediatric Division Docent K. Kubat, M.D.



VONDRÁČKOVÁ, JITKA



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ACC NR: AP6019953 SOURCE CODE: CZ/0079/65/007/003/0236/0238

27
B

AUTHOR: Vondrakova, M.

ORG: Department of General Hygiene and Communal Hygiene, Medical Faculty of Hygiene, Charles University, Prague (Katedra hygieny obecne a kommunalni lek. fak. hygienicke KU)

TITLE: Changes in the serum level of free fatty acids in rats repeatedly exposed to noise

SOURCE: Activitas nervosa superior, v. 7, no. 3, 1965, 236-238

TOPIC TAGS: rat, acoustic biologic effect, serum, biochemistry

ABSTRACT: Changes in the content of free fatty acids in the serum of the rats indicate that repeated noise influences their level. The level of the acids increases substantially after extended exposure to noise. No differences in the influence of noise were due to the age of the rats when first exposed to the noise. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 06/ SUBM DATE: 06Feb65

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BABUREK, Jiri; VONDRAKOVA, Milena, inz.

Comparison of properties of paper clays. Papir a celulosa 19 no. 7:195-197 Jl '64.

1. Institute of Plain Pottery Technology and Ceramic Material Dressing, Karlovy Vary (for Baburek). 2. Research Institute of Paper and Cellulose, Prague.

BABUREK, Jiri; VONDRAKOVA, Milena

Examination of monodisperse fractions of Sedlec kaolin with the electron microscope. Silikaty 7 no.4:284-293 '63.

1. Ustav technologie hrube keramiky a upravnictvi keramickych surovin, Karlovy Vary; Vyzkumny ustav papiru a celulosy, Praha.

Z/009/61/000/012/001/005
E112/E953

AUTHORS: Zahradník, Lubomír, Formánek Zdeněk, Štovík Miroslav, Tyroler Jiří and Vondráková Zdena

TITLE: Recovery of germanium dioxide from flue dusts

PERIODICAL: Chemický průmysl, no.12, 1961, 625-629

TEXT: The only domestic sources of germanium in Czechoslovakia are the flue dusts from certain coals (germanium contents range from 0.2 to 0.8%) and the present paper discusses three possible methods of recovery via germanium dioxide: 1) Extraction with water or inorganic solvents, such as H_2SO_4, HCl, HNO_3, NaOH and $(NH_4)_2S_x$. Best results are achieved with 0.05 N-H_2SO_4, yielding up to 97% of the available germanium. Extraction efficiency is closely connected with the physical characteristics of the flue dusts, good recoveries being obtainable only with flue dusts of very fine particle size. Furthermore, only germanium available in soluble form will respond to the method. 2) Chlorination of flue dusts. This process can be operated either at lower temperatures, in presence of steam, or at high temperatures, in presence of air. Compared to the distillation method with HCl,

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Recovery of germanium ... Z/009/61/000/012/001/005
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yields of germanium are inferior and the recovered products less pure. A further rectification is therefore necessary. The chlorination method, on the other hand, offers the advantage that even very low-content flue dusts can be processed. 3) Direct distillation with HCl. This method is considered the simplest from the technological point of view. It is only suitable for raw materials, containing germanium in a volatilisable form and is not economical for flue-dusts with low germanium content. The method consists of treating the flue dust with HCl, and procedures for the separation of the formed $GeCl_4$ are described in detail. So far, this has been effected in two ways: a) Absorption of the gaseous mixture in water, containing 20% HCl. A recovery of 2-13 g germanium per 1 litre is feasible but this is considered unsatisfactory. b) Separation of germanium tetrachloride by condensation. However, considerable amounts of $GeCl_4$ are entrained by HCl, and the method is, therefore, rejected as uneconomical. The authors now offer a new procedure for $GeCl_4$ absorption, based on the use of non-polar solvents, of which carbon tetrachloride has proved the most suitable. The efficiency of a 0.2% $GeCl_4$ solution in CCl_4

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Recovery of germanium ... Z/009/61/000/012/001/005
E112/E953

is given as 97-99.5% at 20°C. As practical processing would require large volumes of CCl_4 (1500 kg/kg Ge) a two-step absorption process is suggested. A diagram of a laboratory arrangement for the continuous recovery of germanium tetrachloride by the carbon tetrachloride method is shown (Fig.6). The apparatus operates under slight vacuum and has a capacity of 30 kg flue dust per day. The solution of $GeCl_4$ in CCl_4 is preliminarily refined by extraction with concentrated hydrochloric acid, containing 10% nitric acid. Hydrolysis of $GeCl_4$ is carried out in the usual way. The experience gained in laboratory trials led to the construction of a semi-technical batch-wise unit, which in two months produced 10 kg germanium dioxide from 1000 kg flue dust. There are 5 tables, 5 figures and 5 references: 2 Soviet-bloc and 3 non-Soviet bloc. The English-language references read as follows: Ref.1: Journal of Metals, 979(1953); Ref.2: Johnson O.H., Chemical Reviews, vol.51, 432 (1952); Ref.5: Aubrey K.V., Nature, vol.176, 2 (1955).

ASSOCIATION: Ústav nerostných surovin, Praha
(Institute for Mineral Raw Materials, Prague)

Card 3/3 4

Recovery of germanium ... Z/009/61/000/012/001/005
E112/E953

SUBMITTED: January 16, 1961

Fig.6. Legend.

1 - mixing vessel, with stirrer, for absorption of flue dust in hydrochloric acid,
3,4 - steam-heated boiling tubes,
5 - separator,
6 - condenser,
7 - absorption vessel,
8 - absorption column with Raschig rings,
10 - separating funnel with CCl_4,
9 - condenser, cooled to 0°C,
11 - reservoir, to which a slight vacuum is applied.

Card 4/5 4/

VONDRAKOVA, Zdena, inz.; ZAHRADNIK, Lubomir, dr., inz., laureat statni ceny; STOVIK, Miroslav, inz., laureat statni ceny

Gallium and its raw materials in Czechoslovakia. Geol pruzkum 5 no.5:142-143 My '63.

1. Ustav nerostnych surovin, Kutna Hora, pracoviste v Praze.

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Z/009/61/000/007/001/004
E112/E135

AUTHORS: Zahradník, Lubomír, Formánek, Zdeněk, Šťovík, Miroslav, Tyroler, Jiří, and Vondráková, Zdena

TITLE: Properties of furnace flue dusts and their use for the recovery of germanium

PERIODICAL: Chemický průmysl, 1961, No.7, pp. 337-341

TEXT: Coal which is rich in germanium was ashed in a reducing atmosphere and coarser fractions were separated by means of cyclones. Flue dust of finer particle size was recovered by electrostatic separation and this contained up to 1% germanium. Industrial recovery of germanium was considered feasible and therefore laboratory methods for its extraction and the nature of the bond between germanium and the flue dust particles were studied. The flue dust was separated into different fractions according to particle size and the relationship between germanium concentration and particle size was investigated. Germanium contents decreased as the particle size increased and, consequently, main attention was paid to flue dust smaller than 60 μ (0.12% Ge). During the ashing of coal a number of elements are volatilized and absorbed

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E112/E135

Properties of furnace flue dusts and their use for the recovery of germanium

from the gaseous phase by the flue dust particles. The sorption process was studied by determining the concentrations of the various elements in the original coal and the flue dust. Spectroscopic methods of analysis were used and results are tabulated. On the average, the flue dusts contained between 27 and 33% combustible materials. Their concentration decreased on extraction with 0,2 N-H_2SO_4, indicating that they did not consist entirely of carbon. Results for three types of flue dust are tabulated, showing the following: 1) loss of weight of flue dust on calcination; 2) loss of weight of flue dust on calcination, after extraction with H_2SO_4; and 3) loss of weight of flue dust on extraction with H_2SO_4. Results of spectrographic analyses of flue dusts, H_2SO_4-extracts and extraction residues are submitted, listing all elements occurring in the three different fractions in the following concentrations: 1) higher than 1%; 2) 1.0-0.1%; 3) 0.1-0.01%; and 4) lower than 0.01%. The following values are tabulated for germanium: original sample of flue dust, 1 - 0.1%;

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Properties of furnace flue dusts and their use for the recovery of germanium

H_2SO_4-extract, 1 - 0.1%; ashing residue of H_2SO_4-extract, 0.1 - 0.01%. Extraction methods for germanium from flue dusts, using water, acids, and alkalis, are described. Water extraction recovered about 50% of the available germanium. Extractability with H_2SO_4 was inversely proportional to the concentration of the latter, (20 N-H_2SO_4 extracted 64.5% Ge, while 0.05 N-H_2SO_4 gave 96.7% recovery). On the other hand, extractability with HCl increases with increased concentration. Recovery of Ge by means of HNO_3 was not feasible. The separation of Ge by means of HCl from the coarser fly ashes is also described. An addition of HF (in the form of CaF_2) is recommended to convert the SiO_2 to SiF_4, which is driven off by heating. Extraction with weakly alkaline solutions was somewhat inferior to processing with dilute acids. In order to obtain additional information about the isolation of germanium from flue dusts, the volatility of germanium dioxide at different temperatures was studied and results are tabulated. It was found that up to 400 °C germanium was not volatile and was

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E112/E135

Properties of furnace flue dusts ....

assumed to be present as GeO_2, easily soluble in alkalies. On the other hand, samples of flue dust, heated under identical conditions, showed poor extractability of Ge by means of dilute sulfuric acid. This is explained by the poor solubility of GeO_2 in H_2SO_4. It is concluded from laboratory experiments that flue dusts containing 0.3-1.0% Ge present a suitable raw-material for a Czechoslovak germanium recovery industry. Extraction with dilute sulfuric acid or treatment with HCl and distillation as $GeCl_4$, optionally in a stream of HCl, are suggested. The described laboratory methods were utilized for industrial scale production, details of which are to be published later.
There are 7 figures, 12 tables and 12 references: 3 Czech, 7 English and 2 German.

ASSOCIATION: Ústav nerostných surovin, Praha
(Institute for Mineral Raw-Materials, Prague)

SUBMITTED: January 16, 1961

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S/081/62/000/019/019/053
B144/B180

AUTHORS: Stovík, Miroslav, Zahradník, Lubomír, Tyroler, Jiří, Vondra-
ková, Zdena, Formanek, Zdenek

TITLE: Production of concentrates of germanium and other trace elements by burning coal in furnace grates

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1962, 340, abstract 19K82 (Czechoslovakian patent 99414, April 15, 1961)

TEXT: When coal is burned in furnaces, almost all the Ge is carried away with the finer fractions in the form of volatile compounds. For more complete removal it is suggested that the coal should be burnt in a reducing atmosphere. To this end the entry of primary air from below is restricted to a minimum and that of secondary air above the grate is increased. The amount of Ge compounds adsorbed in the thin fractions then rises to 80% the Ge content of the coal. The combustion gases are led through a cyclone, where the largest particles are separated, and then through an electrostatic filter and a second cyclone. Alternatively, after separating the large particles, the gas is passed through a scrubber, (with either mineral or sili-

Card 1/2

Production of concentrates ...

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B144/B180

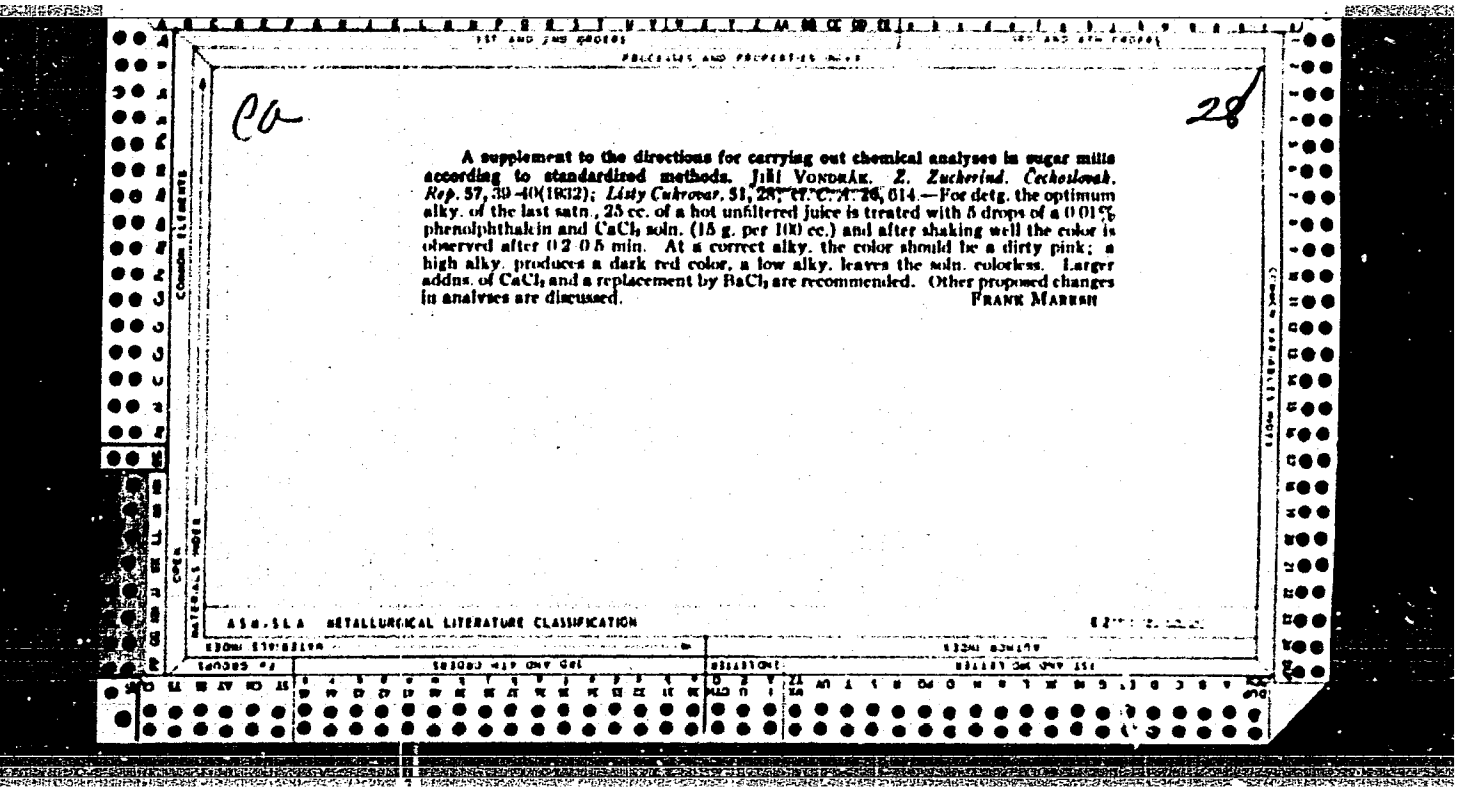
cone oil), and then conducted through a hydrocyclone and a centrifuge, where the thin fraction is separated. The wash liquid is continuously recycled. Additions of 2-3% by weight sulfur (pyrite) to the coal promote, the formation of volatile Ge compounds (GeS, GeS_2). Diagrams of the process are shown. [Abstracter's note: Complete translation.]

Card 2/2

ZAHRADNIK, Lubomir; FORMANEK, Zdenek; STOVIK, Miroslav; TYROLER, Jiri; VONDRAKOVA, Zdena

Refinement of germanium dioxide. Chem prum 12 no.2:60-63 F '62.

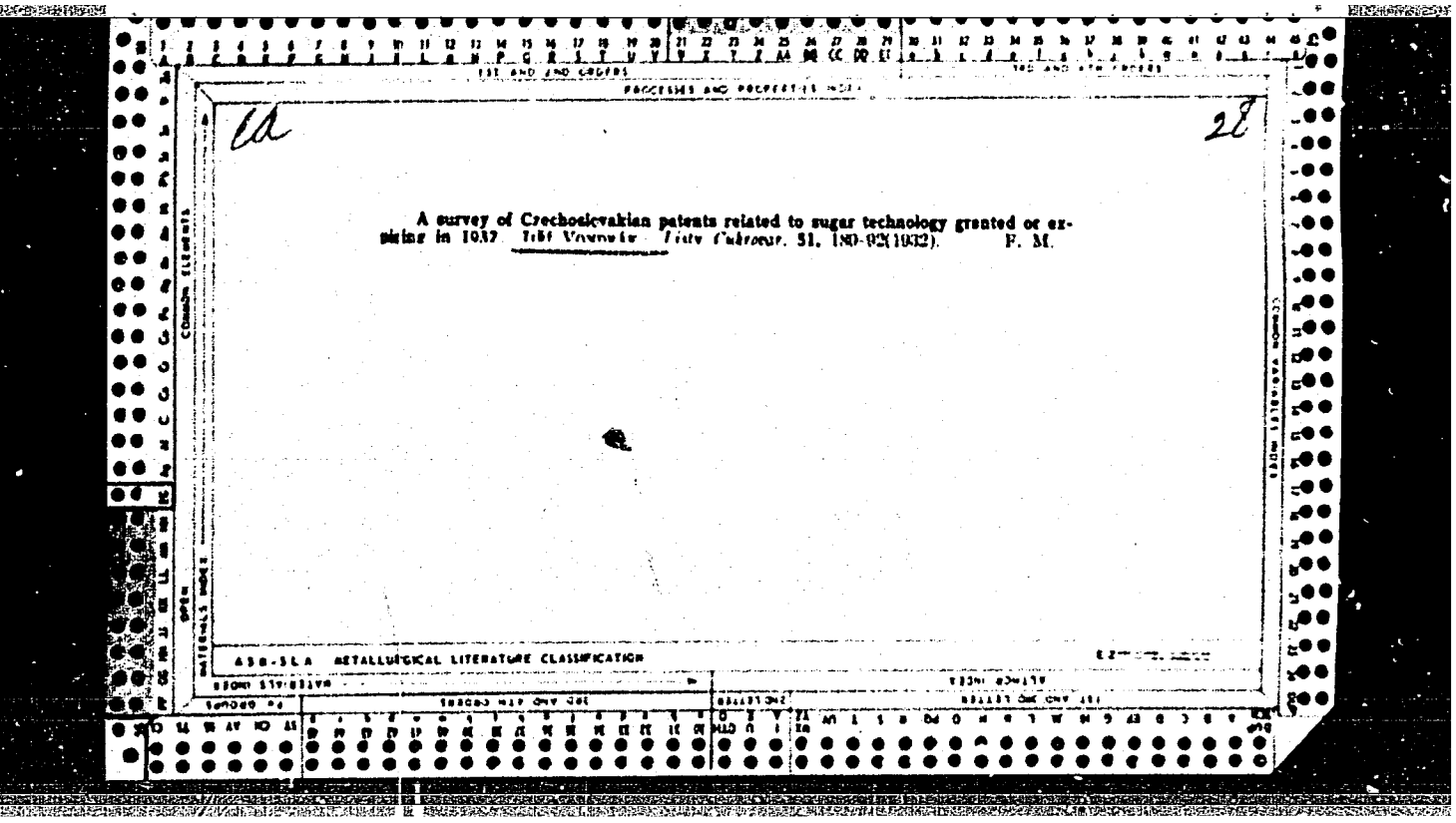
1. Ustav nerostnych surovin, Praha.



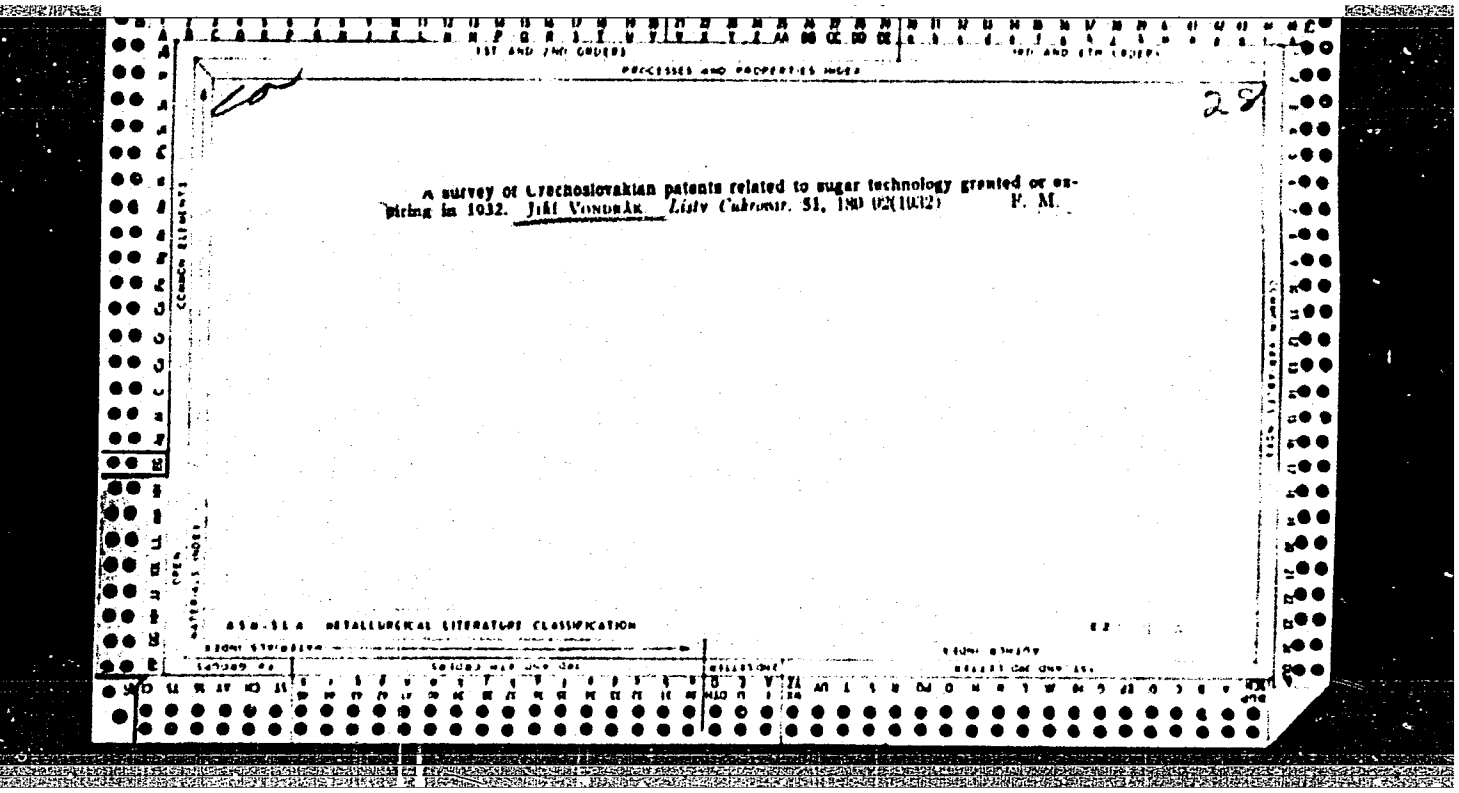
A supplement to the directions for carrying out chemical analyses in sugar mills according to standardized methods. JIŘÍ VONDRÁK. *Z. Zuckerind. Czechoslovak. Rep.* 57, 39–40(1932); *Listy Cukrovar.* 51, 28; *C.C.A.* 26, 614.—For detg. the optimum alky. of the last satn., 25 cc. of a hot unfiltered juice is treated with 5 drops of a 0.01% phenolphthalein and $CaCl_2$ soln. (15 g. per 100 cc.) and after shaking well the color is observed after 0.2–0.5 min. At a correct alky. the color should be a dirty pink; a high alky. produces a dark red color, a low alky. leaves the soln. colorless. Larger addns. of $CaCl_2$ and a replacement by $BaCl_2$ are recommended. Other proposed changes in analyses are discussed.

FRANK MARUSH

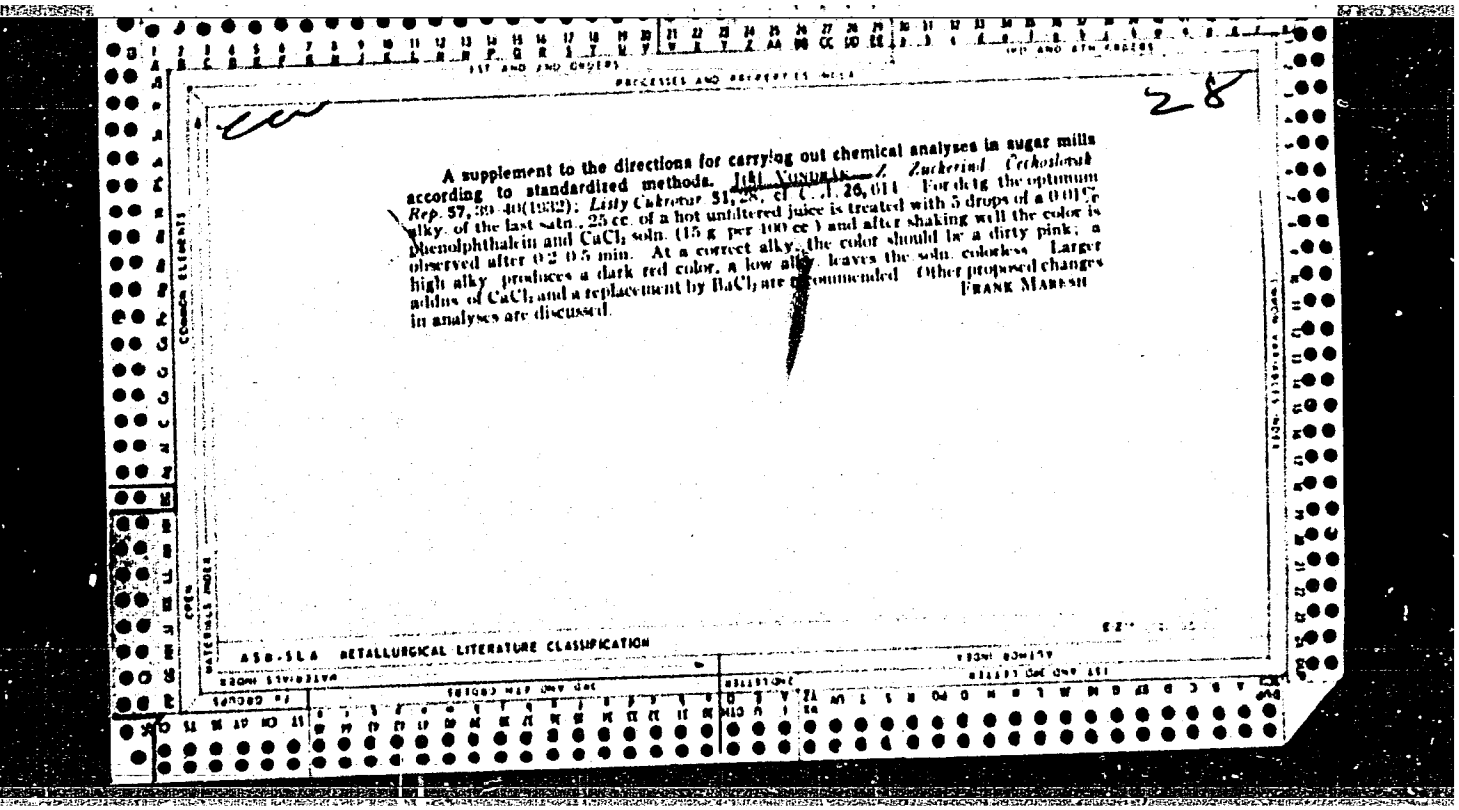
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



A survey of Czechoslovakian patents related to sugar technology granted or expiring in 1932. Tibl Vynalezy Ústav Cukrovar. 51, 180-92(1932). F. M.



A survey of Czechoslovakian patents related to sugar technology granted or expiring in 1932. Jiří Vondrák. *Listy Cukrovar.* 51, 180 (1932) F. M.



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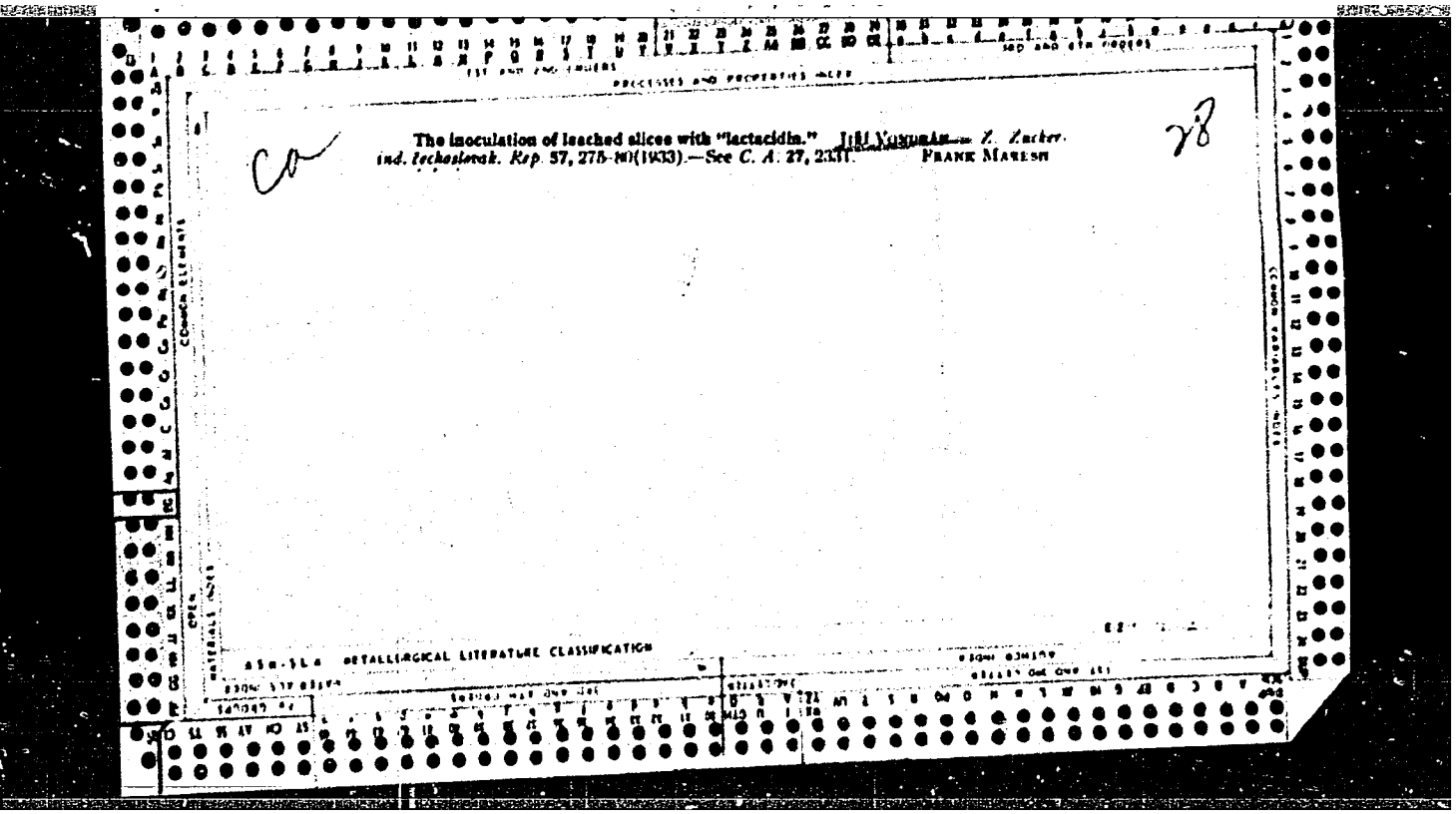
A supplement to the directions for carrying out chemical analyses in sugar mills according to standardized methods. [illegible] *Z. Zuckerind. Cechoslovak Rep.* 57, 39-40(1932); *Listy Cukrovar* 51, 28; cf. C. A. 26, 614. For detg the optimum alky. of the last satn., 25 cc. of a hot unfiltered juice is treated with 5 drops of a 0.01% phenolphthalein and $CuCl_2$ soln. (15 g. per 100 cc.) and after shaking well the color is observed after 0.2-0.5 min. At a correct alky. the color should be a dirty pink; a high alky. produces a dark red color, a low alky. leaves the soln. colorless. Larger additions of $CuCl_2$ and a replacement by $BaCl_2$ are recommended. Other proposed changes in analyses are discussed.

FRANK MARESH

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



The inoculation of leached slices with "lactacidin." [illegible] Z. Zucker. *Ind. Techoslovak. Rep.* 57, 275-80(1933).—See *C. A.* 27, 2331. FRANK MARESH

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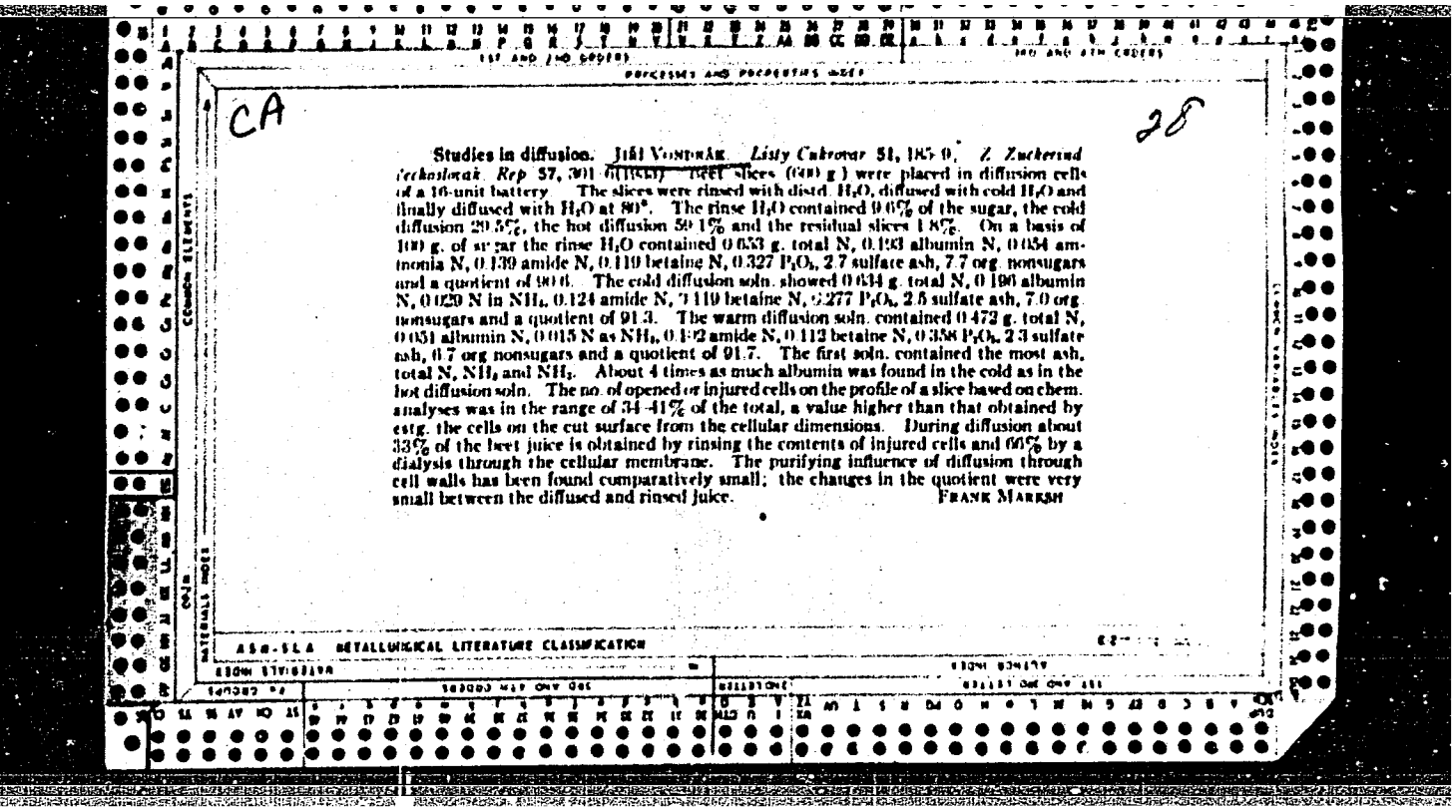
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



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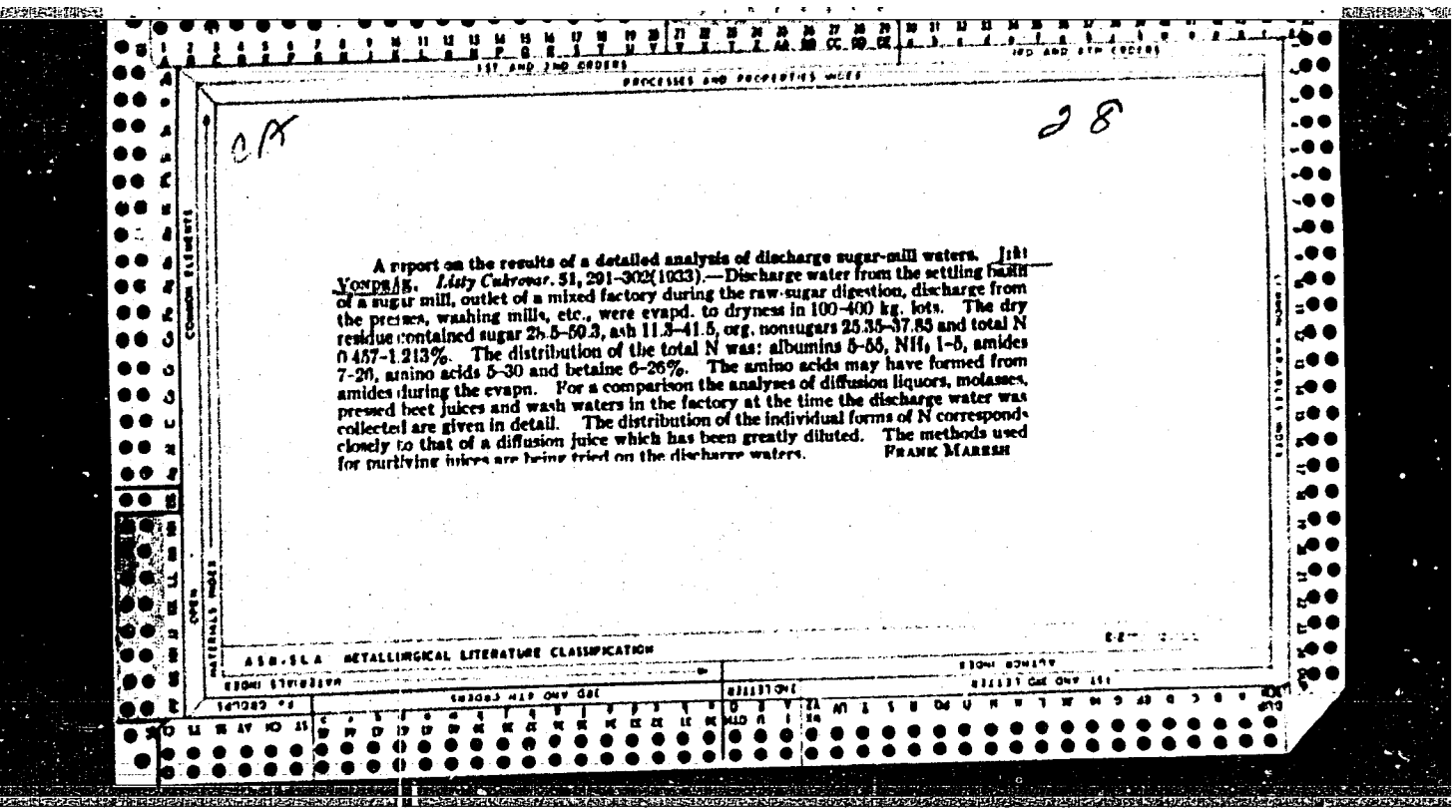
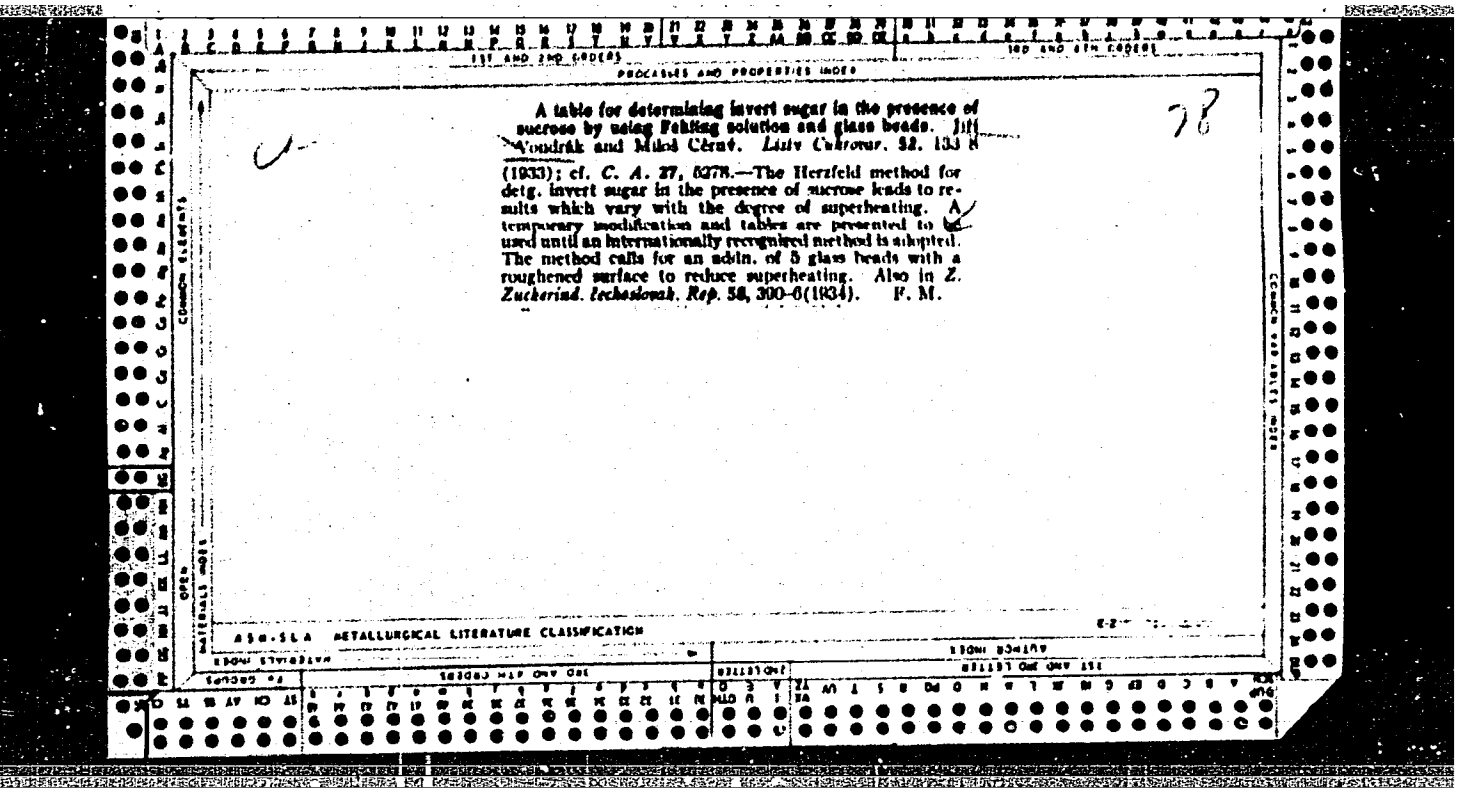
Studies in diffusion. Jiří Vondrák. *Listy Cukrovar* 51, 185-9; *Z. Zuckerind. Cechoslovak. Rep* 57, 301-6(1933). Beet slices (600 g.) were placed in diffusion cells of a 16-unit battery. The slices were rinsed with distd. H_2O, diffused with cold H_2O and finally diffused with H_2O at 80°. The rinse H_2O contained 9.6% of the sugar, the cold diffusion 29.5%, the hot diffusion 59.1% and the residual slices 1.8%. On a basis of 100 g. of sugar the rinse H_2O contained 0.653 g. total N, 0.193 albumin N, 0.054 ammonia N, 0.139 amide N, 0.119 betaine N, 0.327 P_2O_5, 2.7 sulfate ash, 7.7 org. nonsugars and a quotient of 90.6. The cold diffusion soln. showed 0.634 g. total N, 0.196 albumin N, 0.029 N in NH_3, 0.124 amide N, 0.119 betaine N, 0.277 P_2O_5, 2.5 sulfate ash, 7.0 org. nonsugars and a quotient of 91.3. The warm diffusion soln. contained 0.473 g. total N, 0.051 albumin N, 0.015 N as NH_3, 0.192 amide N, 0.112 betaine N, 0.358 P_2O_5, 2.3 sulfate ash, 6.7 org. nonsugars and a quotient of 91.7. The first soln. contained the most ash, total N, NH_3 and NH_2. About 4 times as much albumin was found in the cold as in the hot diffusion soln. The no. of opened or injured cells on the profile of a slice based on chem. analyses was in the range of 34-41% of the total, a value higher than that obtained by estg. the cells on the cut surface from the cellular dimensions. During diffusion about 33% of the beet juice is obtained by rinsing the contents of injured cells and 66% by a dialysis through the cellular membrane. The purifying influence of diffusion through cell walls has been found comparatively small; the changes in the quotient were very small between the diffused and rinsed juice.

FRANK MARSH



A report on the results of a detailed analysis of discharge sugar-mill waters. [illegible] Vondrák. *Listy Cukrovar.* 51, 291–302(1933).—Discharge water from the settling basin of a sugar mill, outlet of a mixed factory during the raw-sugar digestion, discharge from the presses, washing mills, etc., were evapd. to dryness in 100–400 kg. lots. The dry residue contained sugar 28.5–50.3, ash 11.3–41.5, org. nonsugars 25.35–37.85 and total N 0.457–1.213%. The distribution of the total N was: albumins 5–55, NH_3 1–5, amides 7–20, amino acids 5–30 and betaine 6–26%. The amino acids may have formed from amides during the evapn. For a comparison the analyses of diffusion liquors, molasses, pressed beet juices and wash waters in the factory at the time the discharge water was collected are given in detail. The distribution of the individual forms of N corresponds closely to that of a diffusion juice which has been greatly diluted. The methods used for purifying juices are being tried on the discharge waters. FRANK MARESH



A table for determining invert sugar in the presence of sucrose by using Fehling solution and glass beads. Jiří Vondrák and Miloš Černý. *Listy Cukrovar.* 52, 133–8 (1933); cf. *C. A.* 27, 5278.—The Herzfeld method for detg. invert sugar in the presence of sucrose leads to results which vary with the degree of superheating. A temporary modification and tables are presented to be used until an internationally recognized method is adopted. The method calls for an addn. of 5 glass beads with a roughened surface to reduce superheating. Also in *Z. Zuckerind. Tschechoslovak. Rep.* 58, 300–6(1934). F. M.

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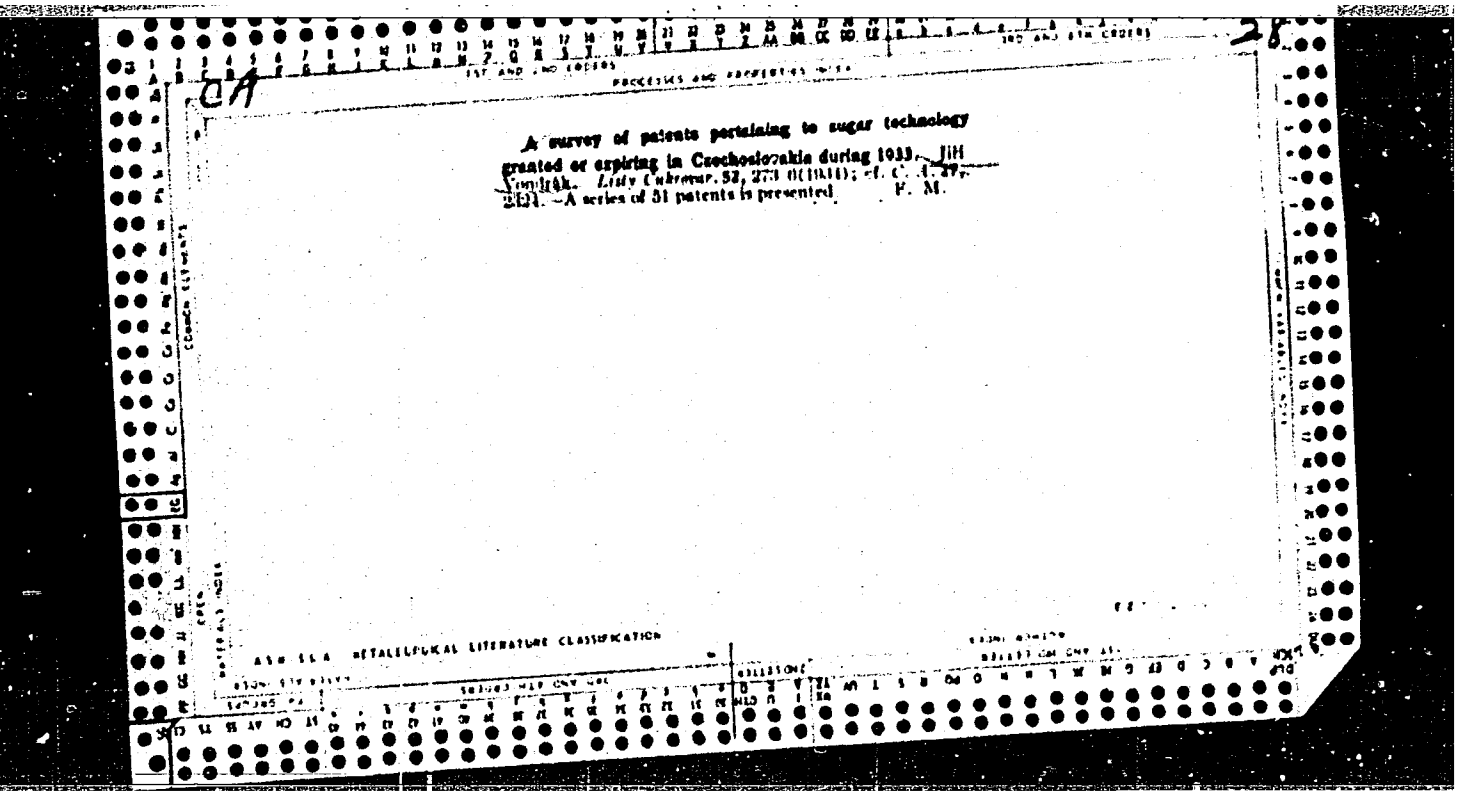
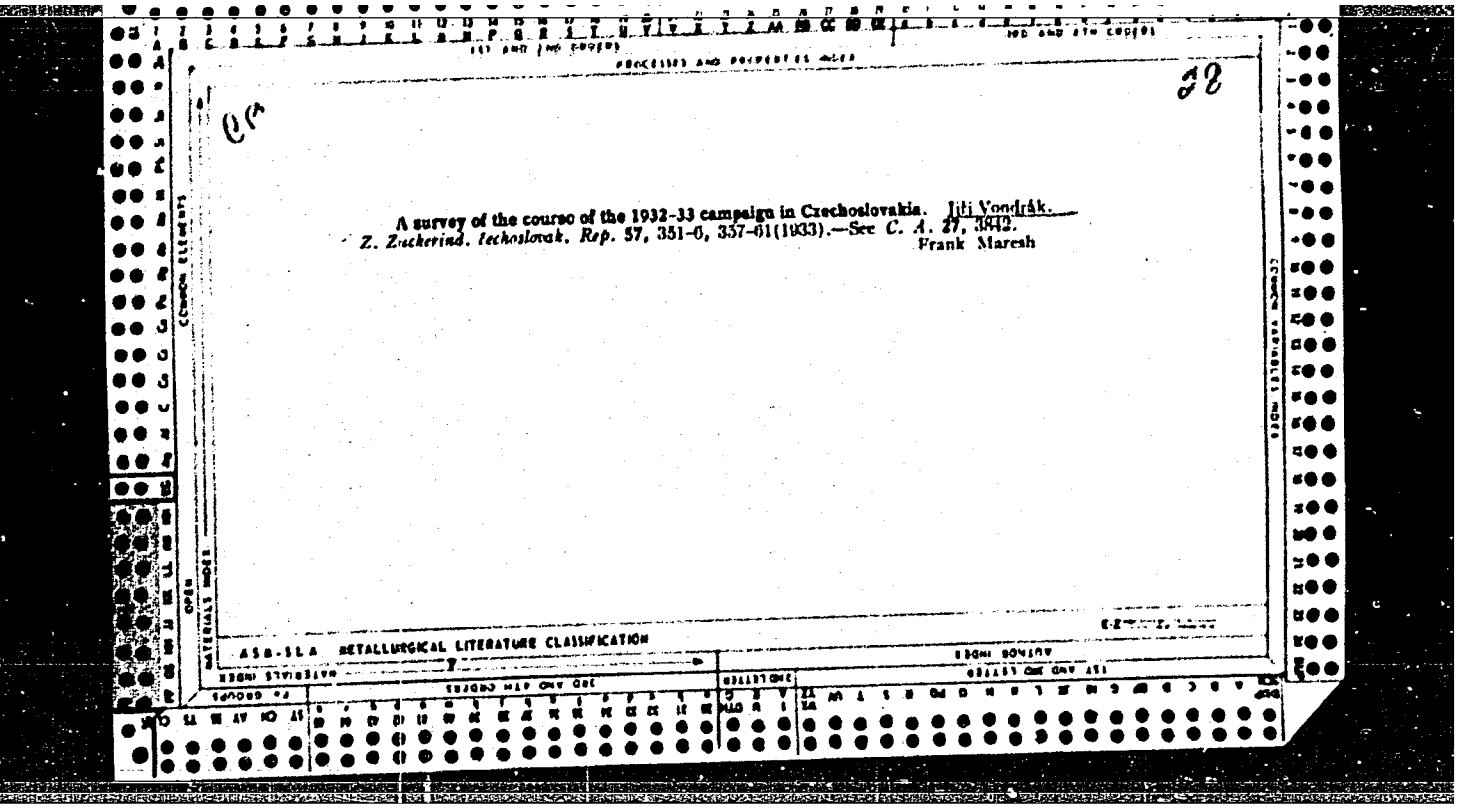
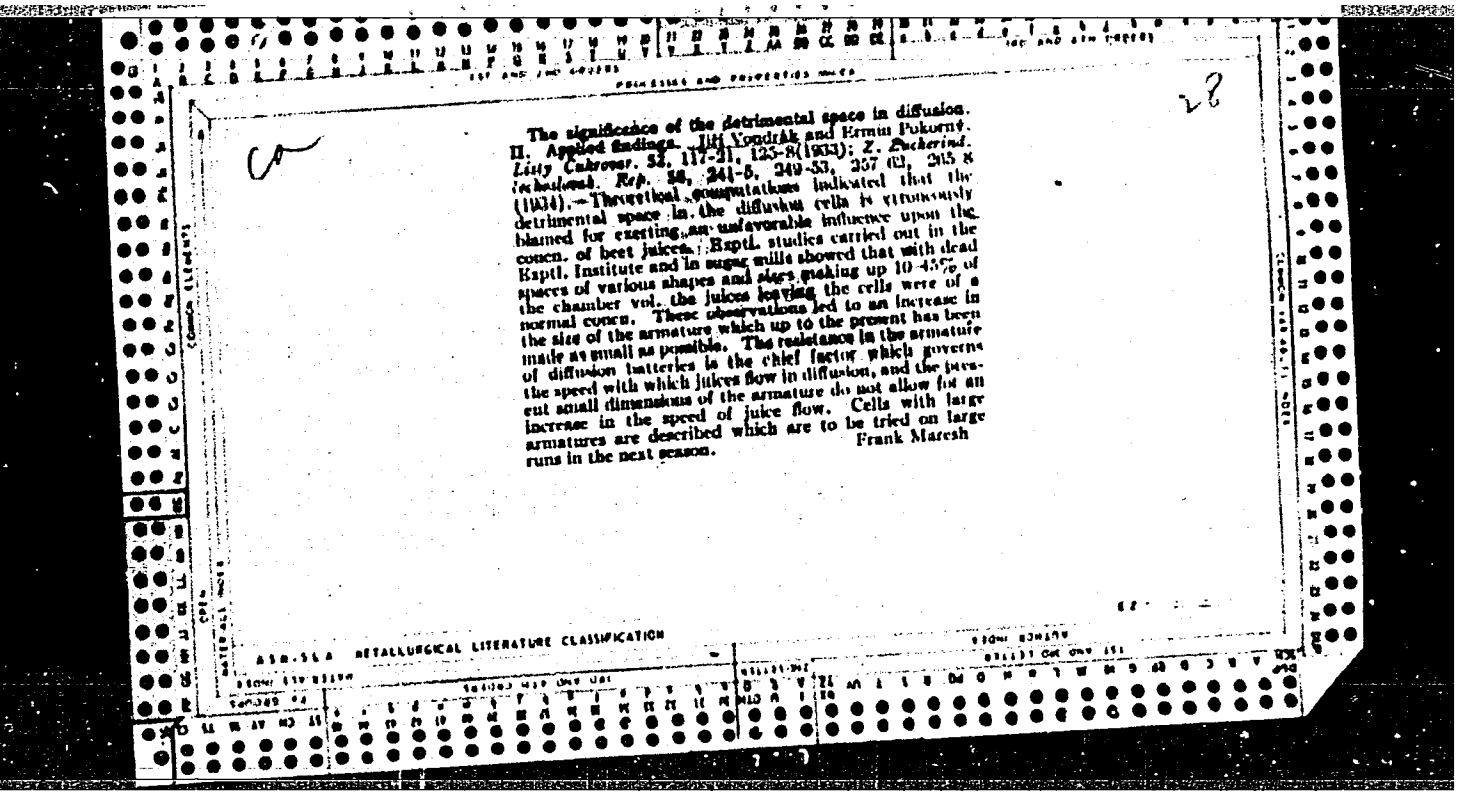


A survey of patents pertaining to sugar technology granted or expiring in Czechoslovakia during 1933. Jiří Vondřák. *Listy Cukrovar.* 52, 273–8(1933); cf. C. A. 27, 2331.—A series of 51 patents is presented. F. M.

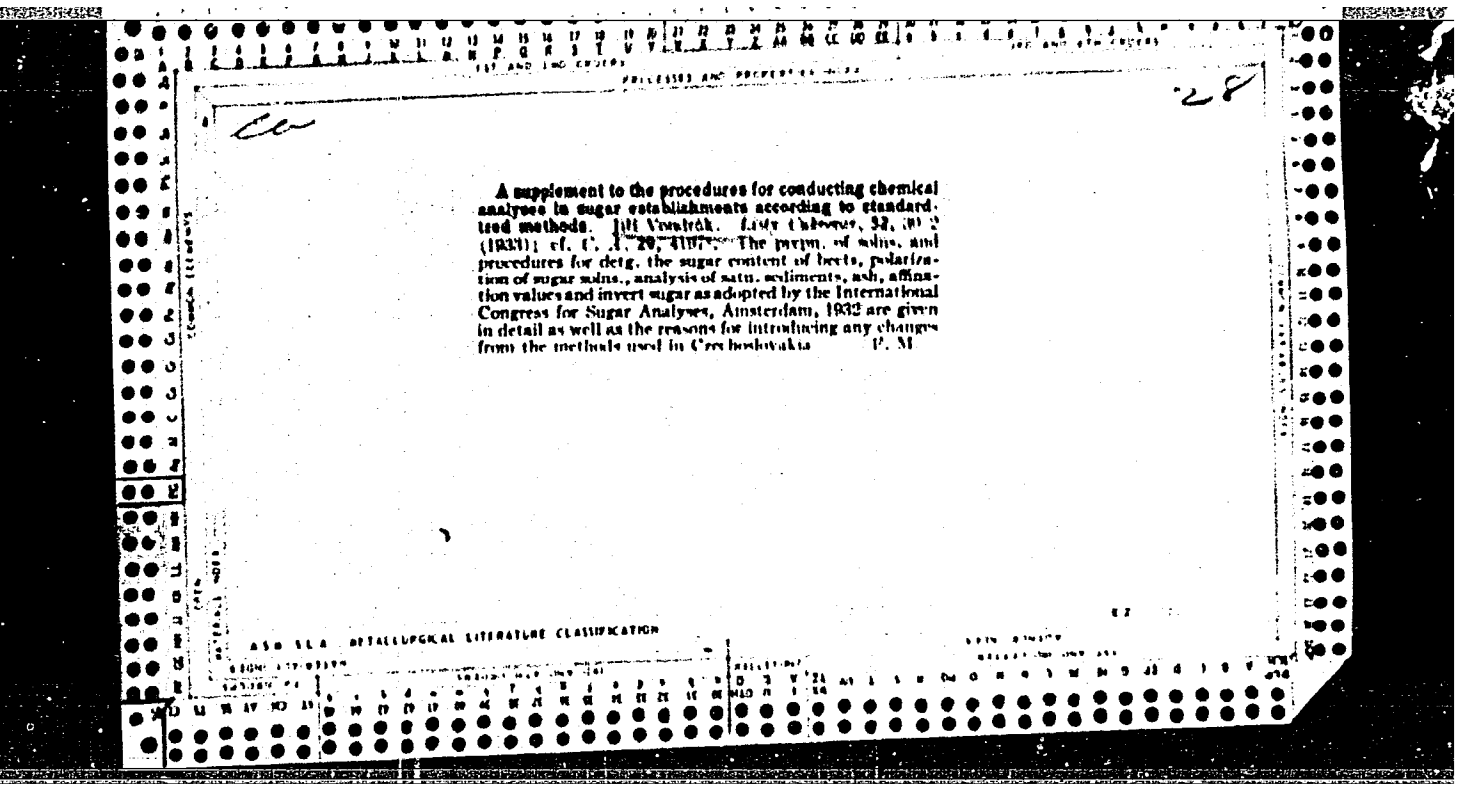


A survey of the course of the 1932-33 campaign in Czechoslovakia. Jiří Vondrák.
Z. Zuckerind. Techoslovak. Rep. 57, 351-6, 357-61(1933).—See *C. A.* 27, 3842.
Frank Maresh



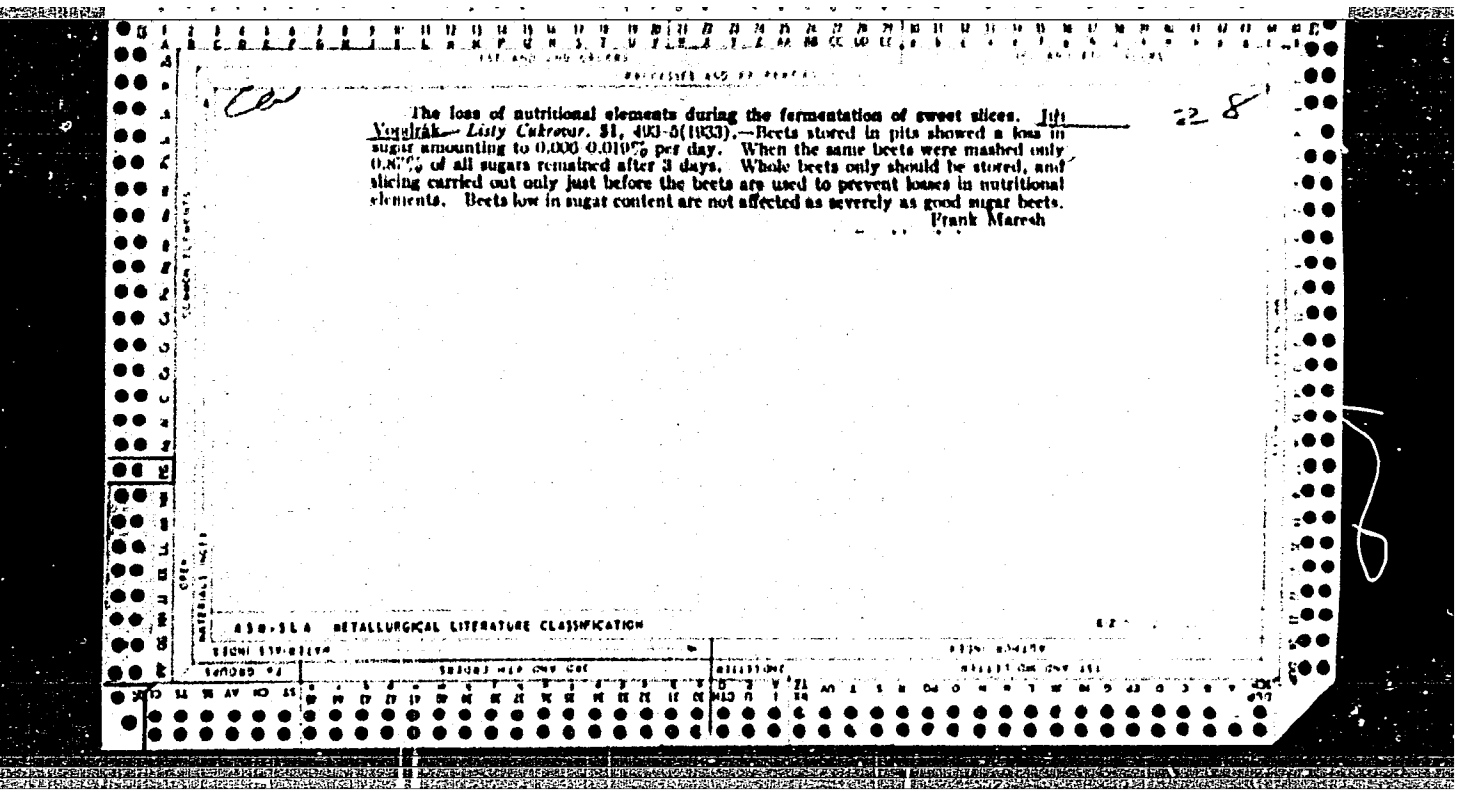
The significance of the detrimental space in diffusion. II. Applied findings. Jiří Vondrák and Ermín Pokorný. *Listy Cukrovar.* 53, 117-21, 125-8(1933); *Z. Zuckerind. Tschechosl. Rep.* 58, 241-5, 249-53, 257-62, 265-8 (1934).—Theoretical computations indicated that the detrimental space in the diffusion cells is erroneously blamed for exerting an unfavorable influence upon the concn. of beet juices. Exptl. studies carried out in the Exptl. Institute and in sugar mills showed that with dead spaces of various shapes and sizes making up 10-45% of the chamber vol. the juices leaving the cells were of a normal concn. These observations led to an increase in the size of the armature which up to the present has been made as small as possible. The resistance in the armature of diffusion batteries is the chief factor which governs the speed with which juices flow in diffusion, and the present small dimensions of the armature do not allow for an increase in the speed of juice flow. Cells with large armatures are described which are to be tried on large runs in the next season.

Frank Maresh



A supplement to the procedures for conducting chemical analyses in sugar establishments according to standardized methods. Jiří Vondrák. *Listy Cukrovar.*, 52, [illegible] (1933); cf. C. A. 20, 4107. The prepn. of solns. and procedures for detg. the sugar content of beets, polarization of sugar solns., analysis of satn. sediments, ash, affination values and invert sugar as adopted by the International Congress for Sugar Analyses, Amsterdam, 1932 are given in detail as well as the reasons for introducing any changes from the methods used in Czechoslovakia. P. M.

ASM-NLA METALLURGICAL LITERATURE CLASSIFICATION



The loss of nutritional elements during the fermentation of sweet slices. Jiří Vogltánk. *Listy Cukrovar.* 51, 403-5(1933).—Beets stored in pits showed a loss in sugar amounting to 0.000 0.010% per day. When the same beets were mashed only 0.87% of all sugars remained after 3 days. Whole beets only should be stored, and slicing carried out only just before the beets are used to prevent losses in nutritional elements. Beets low in sugar content are not affected as severely as good sugar beets.

Frank Marsh

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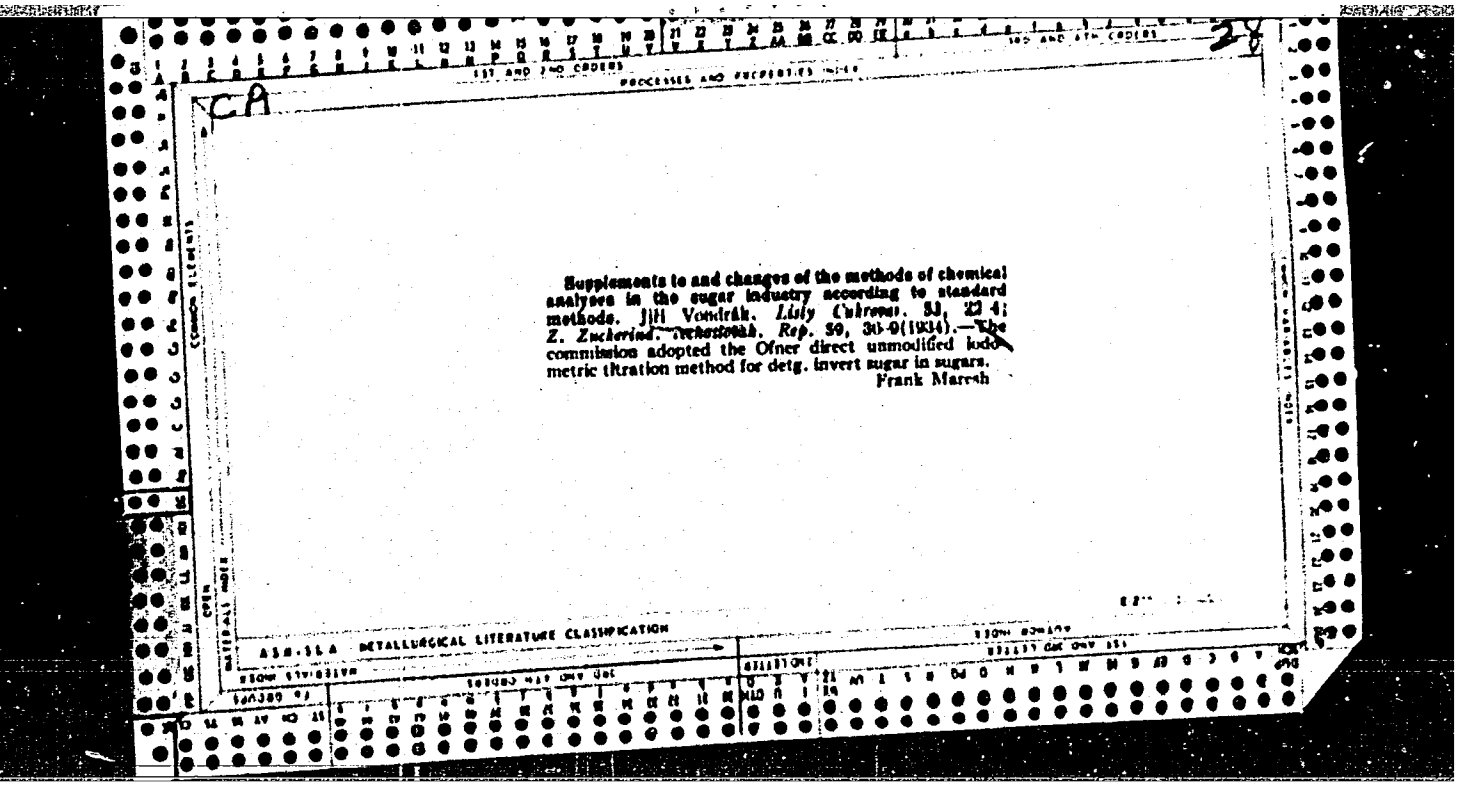
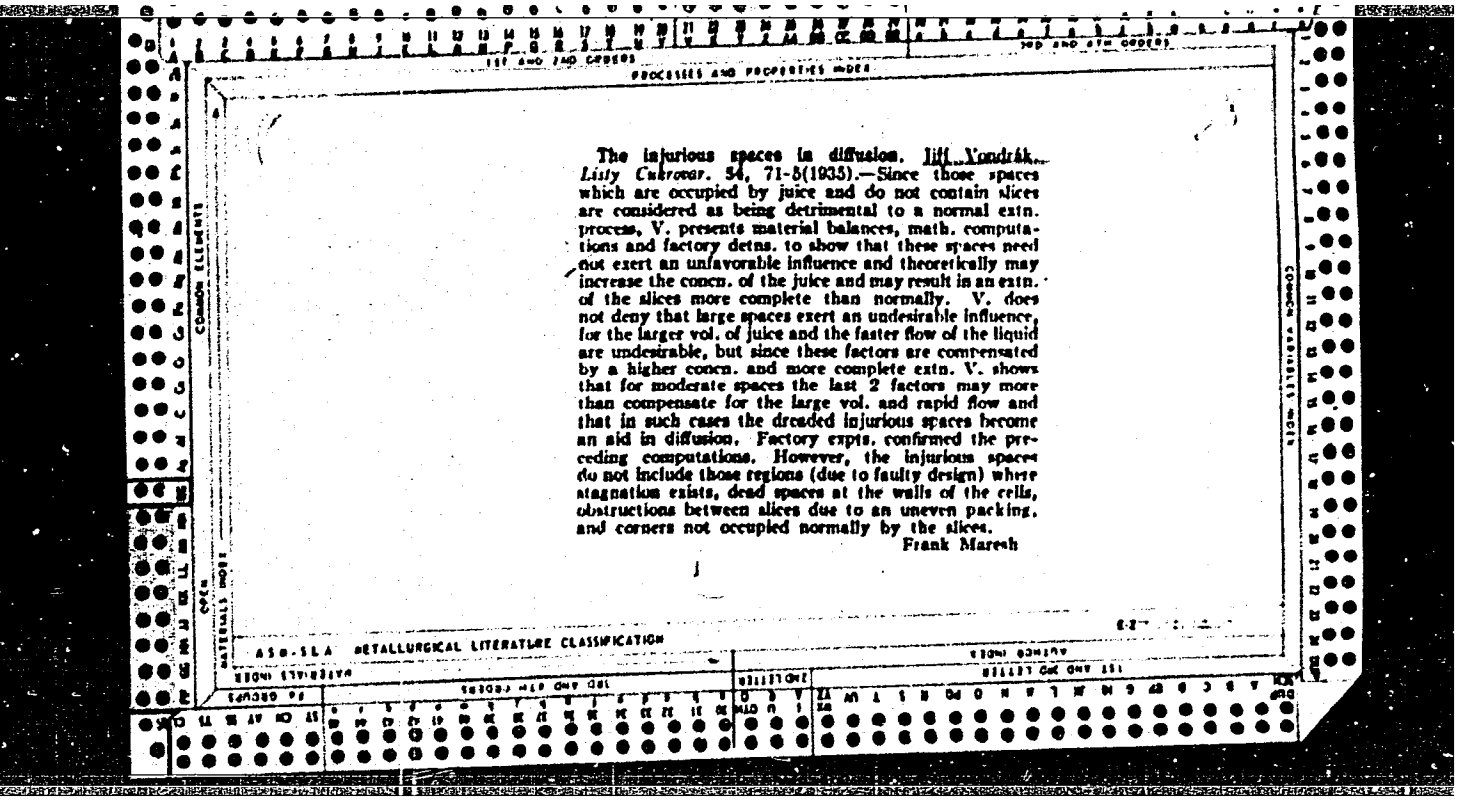
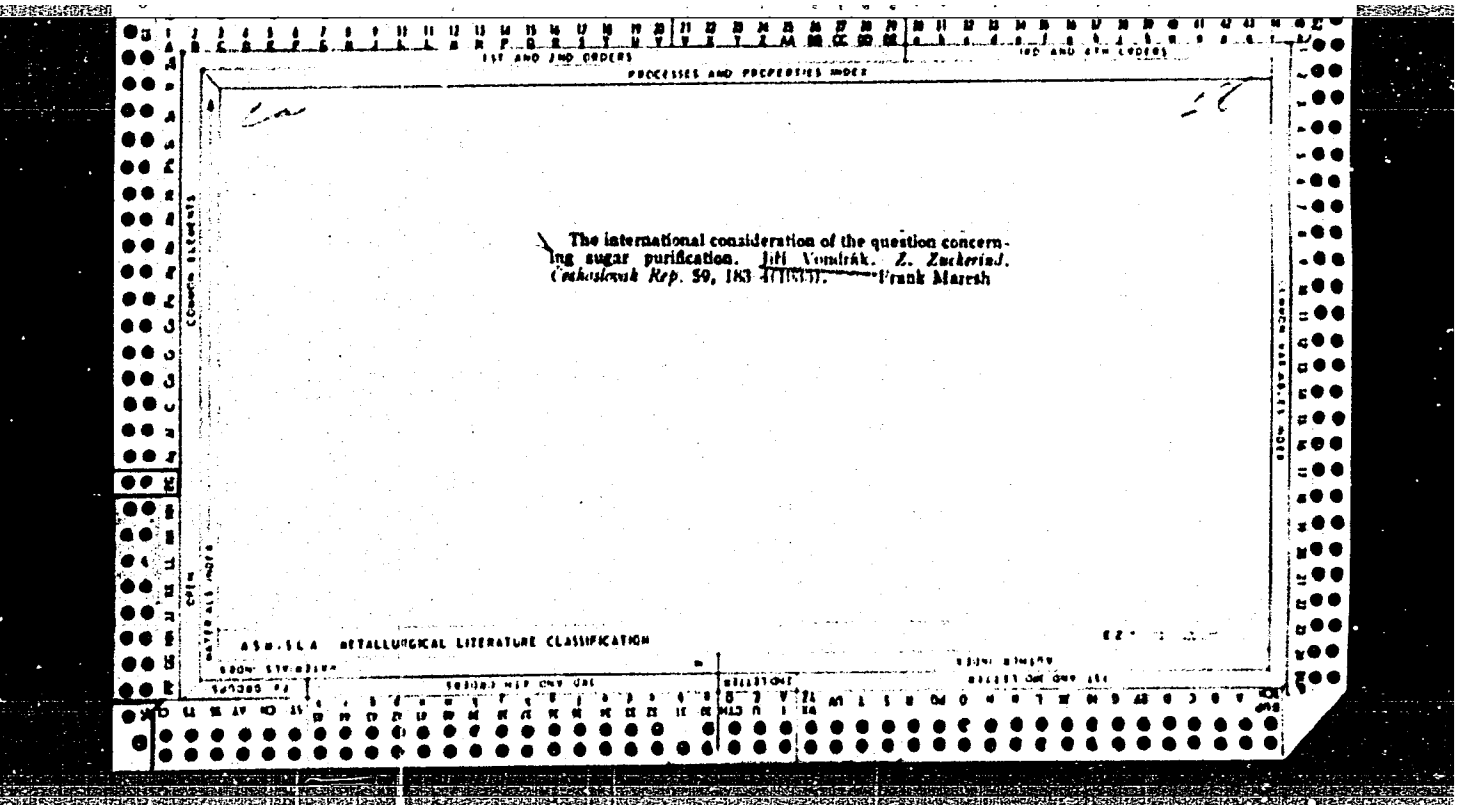


Supplements to and changes of the methods of chemical analyses in the sugar industry according to standard methods. Jiří Vondrák. *Listy Cukrovar.* 53, 221-4; *Z. Zuckerind. Cechoslovak. Rep.* 59, 30-9(1934).—The commission adopted the Ofner direct unmodified Iodometric titration method for detg. invert sugar in sugars.
Frank Marsh

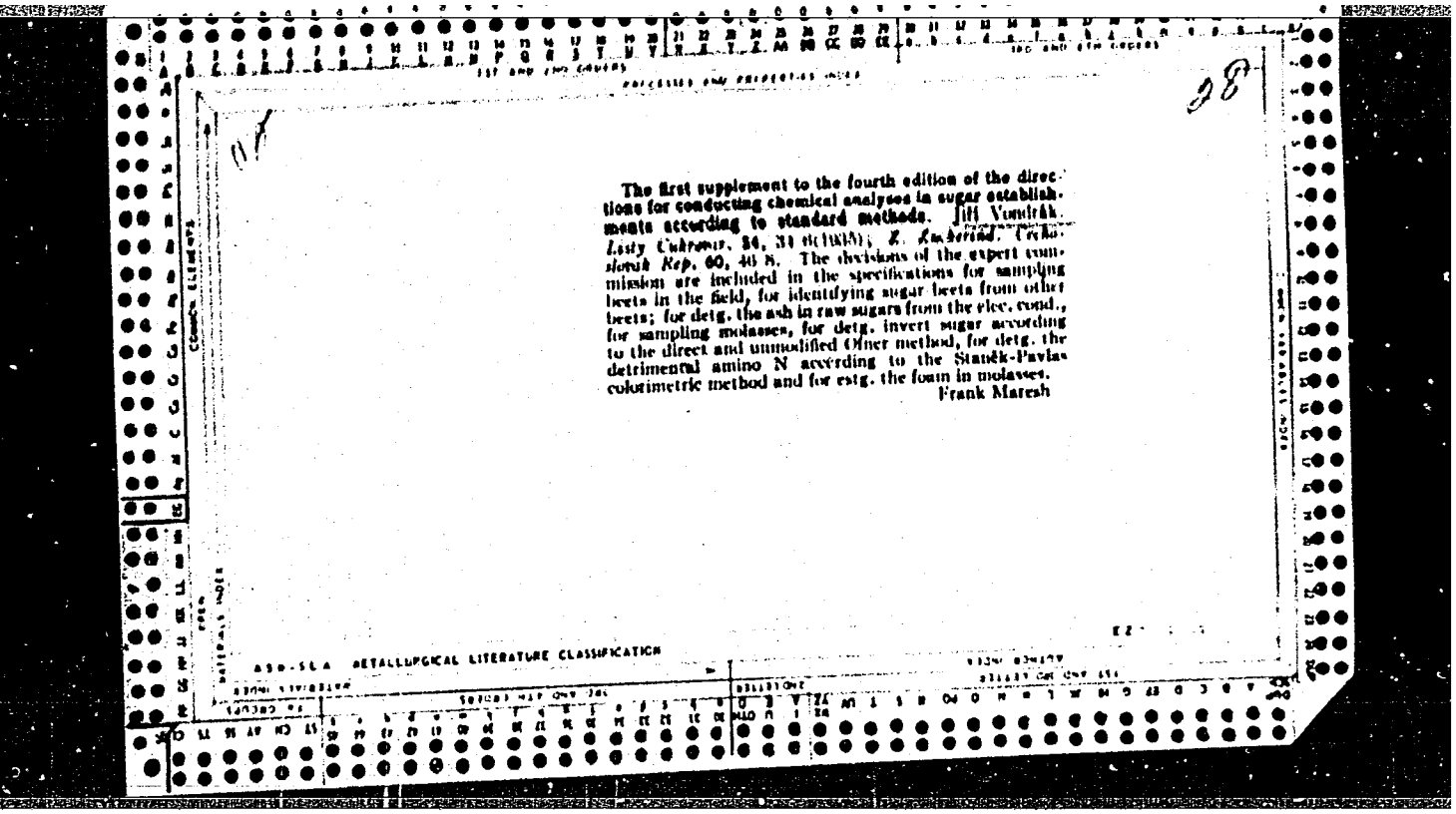


The injurious spaces in diffusion. Jiří Vondrák. *Listy Cukrovar.* 54, 71-5(1935).—Since those spaces which are occupied by juice and do not contain slices are considered as being detrimental to a normal extn. process, V. presents material balances, math. computations and factory detns. to show that these spaces need not exert an unfavorable influence and theoretically may increase the concn. of the juice and may result in an extn. of the slices more complete than normally. V. does not deny that large spaces exert an undesirable influence, for the larger vol. of juice and the faster flow of the liquid are undesirable, but since these factors are compensated by a higher concn. and more complete extn. V. shows that for moderate spaces the last 2 factors may more than compensate for the large vol. and rapid flow and that in such cases the dreaded injurious spaces become an aid in diffusion. Factory expts. confirmed the preceding computations. However, the injurious spaces do not include those regions (due to faulty design) where stagnation exists, dead spaces at the walls of the cells, obstructions between slices due to an uneven packing, and corners not occupied normally by the slices.

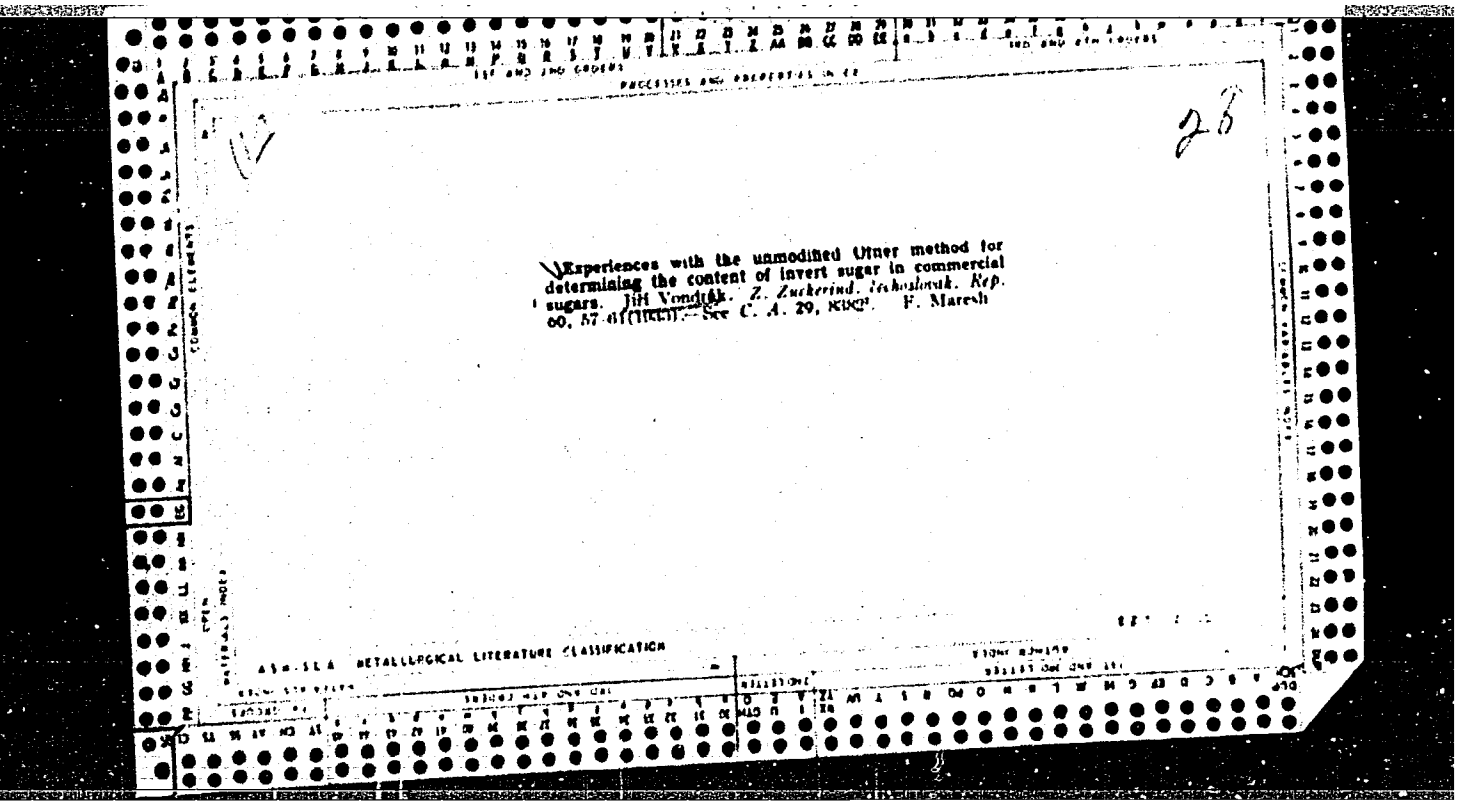
Frank Maresh



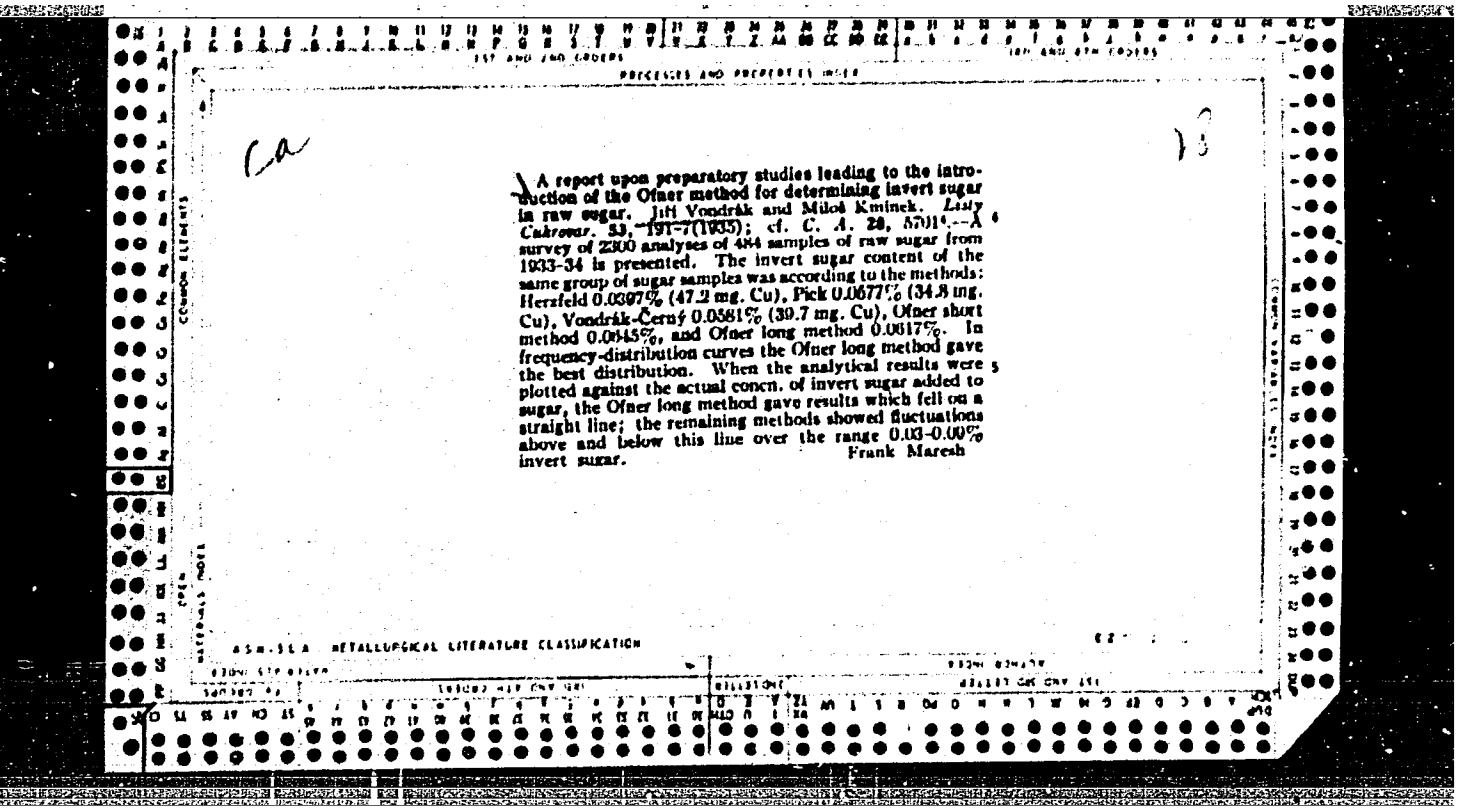
The international consideration of the question concerning sugar purification. Jiří Vomírák. *Z. Zuckerind. Československ Rep.* 59, 183 (1934). —Frank Marsh



The first supplement to the fourth edition of the directions for conducting chemical analyses in sugar establishments according to standard methods. Jiří Vondrák, *Listy Cukrovar.* **54**, 31 6(1935); *Z. Zuckerind. Cechoslovak Rep.* **60**, 40 8. The decisions of the expert commission are included in the specifications for sampling beets in the field, for identifying sugar beets from other beets; for detg. the ash in raw sugars from the elec. cond., for sampling molasses, for detg. invert sugar according to the direct and unmodified Ofner method, for detg. the detrimental amino N according to the Stanek-Pavlas colorimetric method and for estg. the foam in molasses.
Frank Maresh

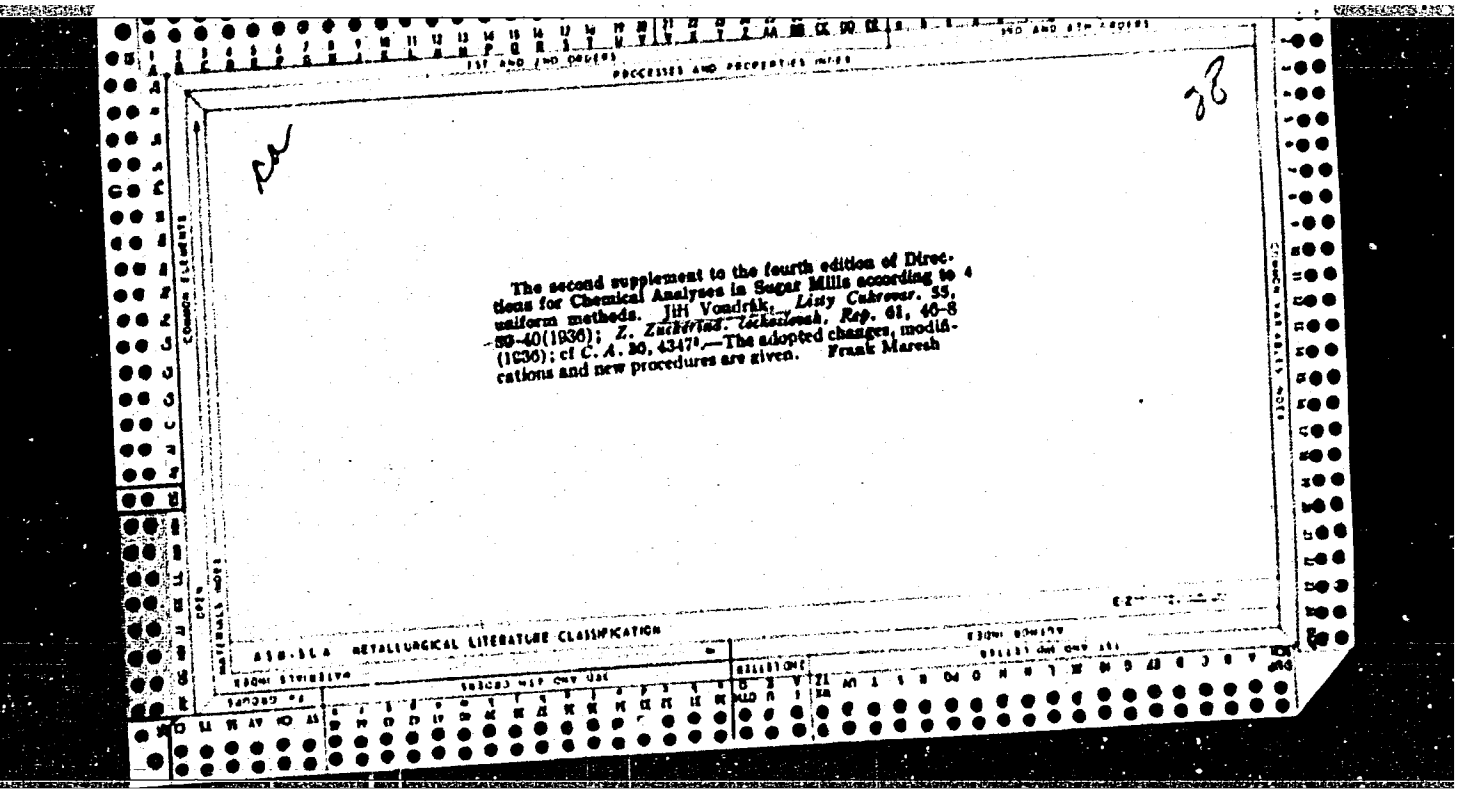


Experiences with the unmodified Ulner method for determining the content of invert sugar in commercial sugars. Jiří Vondrák. *Z. Zuckerind. tschechoslovak. Rep.* 60, 57-61(1935).—See *C. A.* 29, 8502⁸. F. Maresh

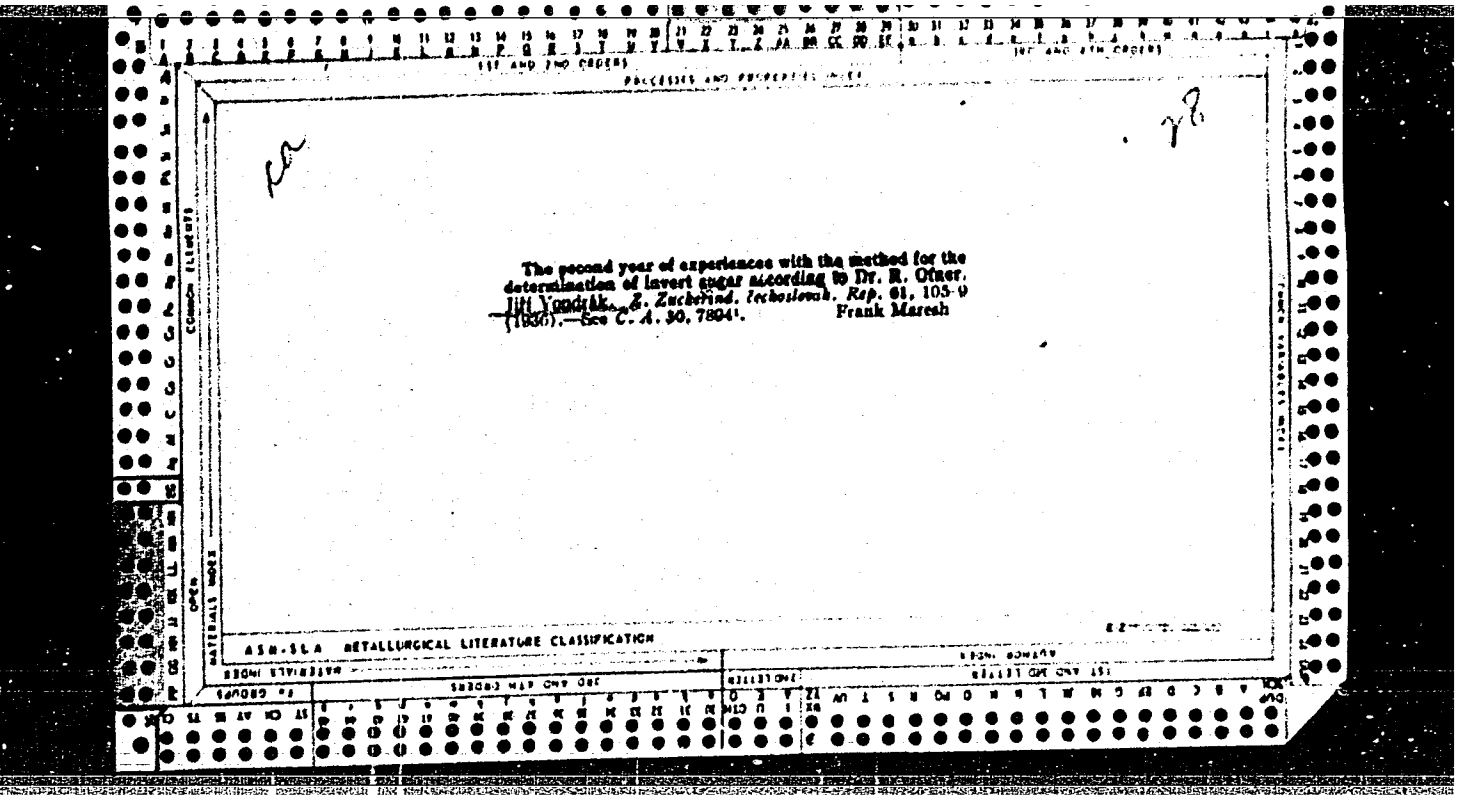


A report upon preparatory studies leading to the introduction of the Ofner method for determining invert sugar in raw sugar. Jiří Vondrák and Miloš Kminek. *Listy Cukrovar.* 53, 191–7(1935); cf. C. A. 28, 5701⁶.—A survey of 2300 analyses of 484 samples of raw sugar from 1933-34 is presented. The invert sugar content of the same group of sugar samples was according to the methods: Herzfeld 0.0397% (47.2 mg. Cu), Pick 0.0677% (34.8 mg. Cu), Vondrák-Cerný 0.0581% (39.7 mg. Cu), Ofner short method 0.0845%, and Ofner long method 0.0617%. In frequency-distribution curves the Ofner long method gave the best distribution. When the analytical results were plotted against the actual concn. of invert sugar added to sugar, the Ofner long method gave results which fell on a straight line; the remaining methods showed fluctuations above and below this line over the range 0.03–0.00% invert sugar.

Frank Maresh

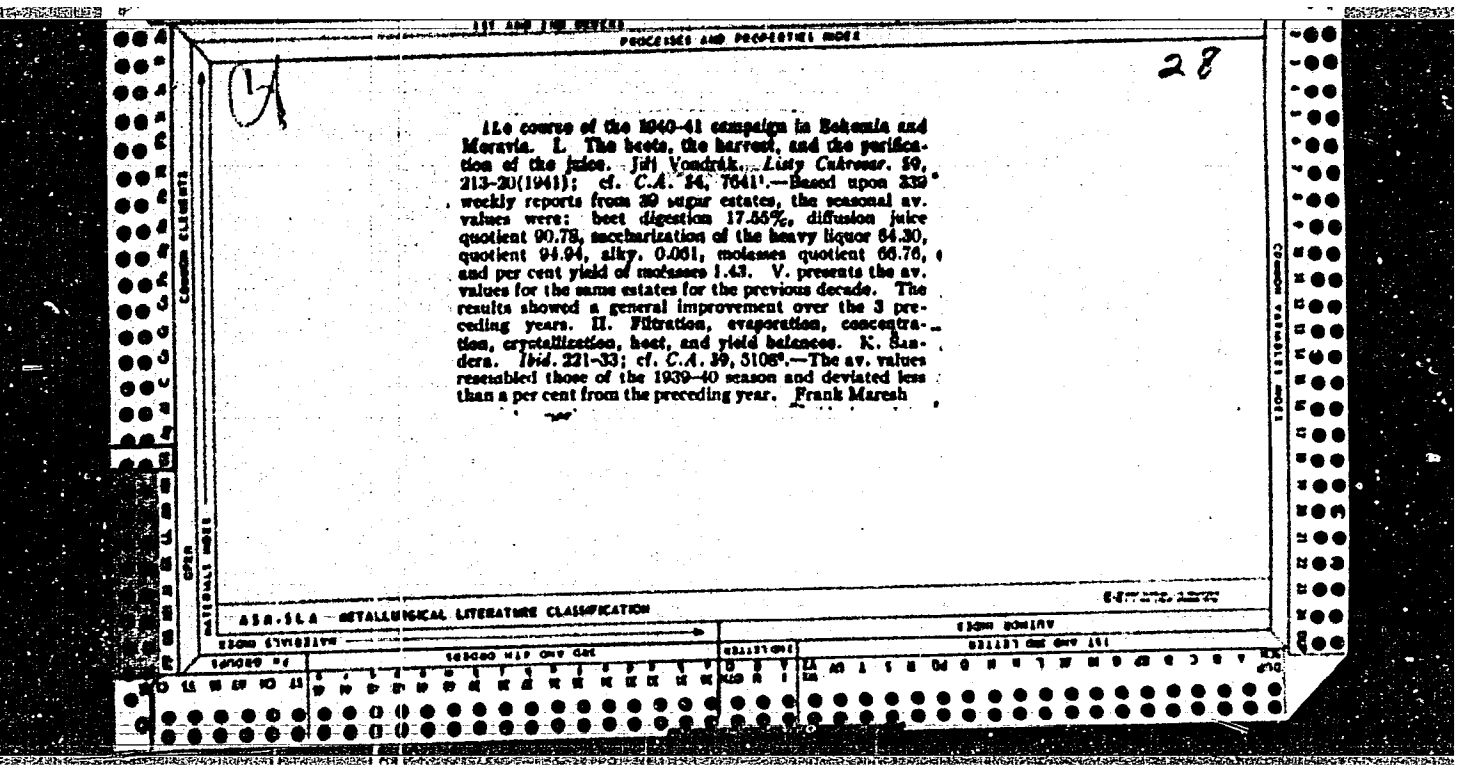


The second supplement to the fourth edition of Directions for Chemical Analyses in Sugar Mills according to uniform methods. Jiří Vondrák. *Listy Cukrovar.* 55, 39-40(1936); *Z. Zuckerind. Tschechosl. Rep.* 61, 46-8 (1936); cf *C. A.* 30, 4347⁹.—The adopted changes, modifications and new procedures are given. Frank Mareš



The second year of experiences with the method for the determination of invert sugar according to Dr. R. Otner. Jiří Vondrák. *Z. Zuckerind. Tschechoslowak. Rep.* 61, 105-9 (1936).—See *C. A.* 30, 7804[1]. Frank Maresh

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



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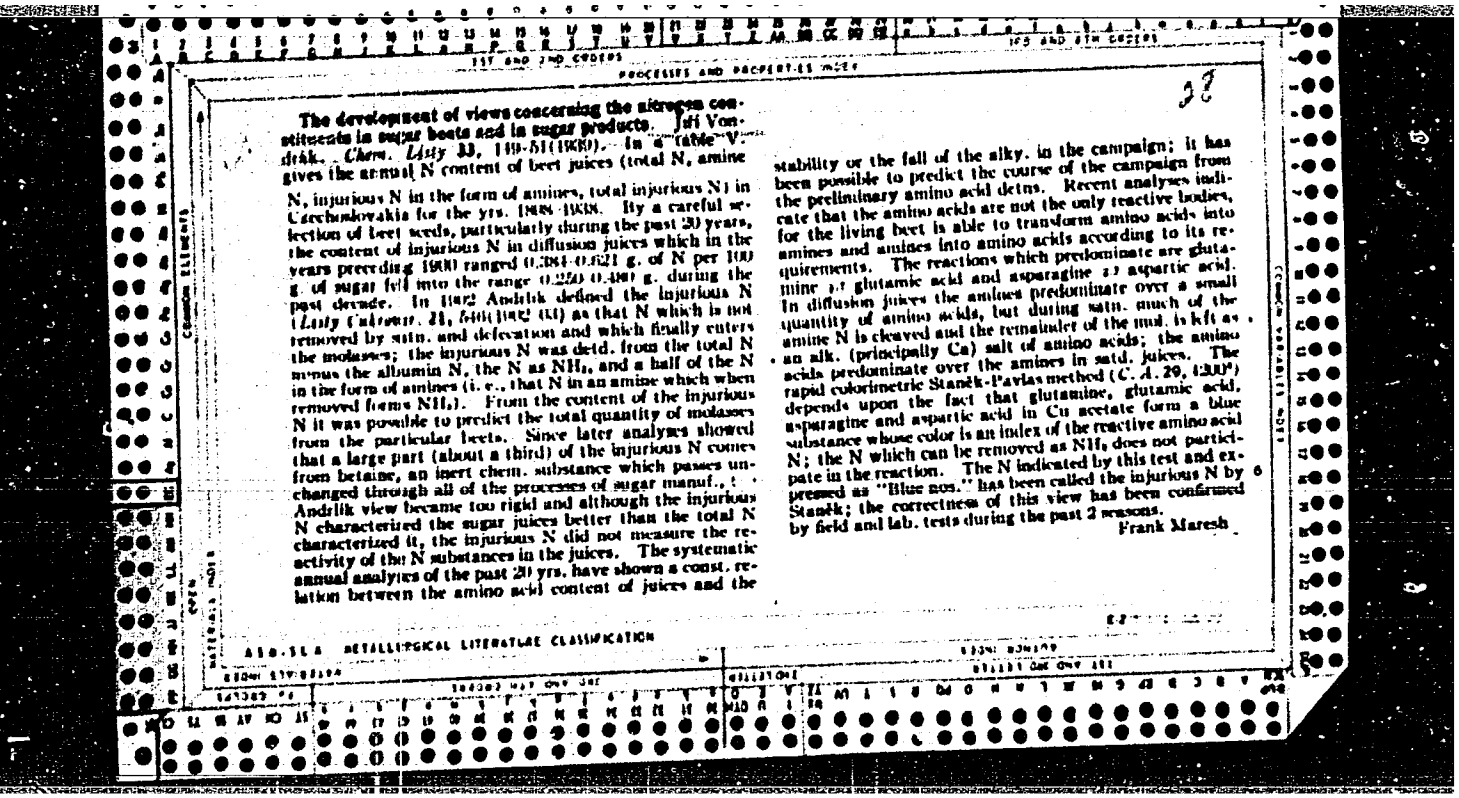
The course of the 1940-41 campaign in Bohemia and Moravia. I. The beets, the harvest, and the purification of the juice. Jiří Vondrák. *Listy Cukrovar.* 59, 213-20(1941); cf. *C.A.* 34, 7641¹.—Based upon 339 weekly reports from 39 sugar estates, the seasonal av. values were: beet digestion 17.55%, diffusion juice quotient 90.78, saccharization of the heavy liquor 84.30, quotient 94.94, alky. 0.061, molasses quotient 66.76, and per cent yield of molasses 1.43. V. presents the av. values for the same estates for the previous decade. The results showed a general improvement over the 3 preceding years. II. Filtration, evaporation, concentration, crystallization, heat, and yield balances. K. Sanders. *Ibid.* 221-33; cf. *C.A.* 39, 5108⁸.—The av. values resembled those of the 1939–40 season and deviated less than a per cent from the preceding year. Frank Maresh



The development of views concerning the nitrogen constituents in sugar beets and in sugar products. Jiří Vondřák. *Chem. Listy* 33, 149-51(1939). In a table V. gives the annual N content of beet juices (total N, amine N, injurious N in the form of amines, total injurious N) in Czechoslovakia for the yrs. 1928-1938. By a careful selection of beet seeds, particularly during the past 20 years, the content of injurious N in diffusion juices which in the years preceding 1900 ranged 0.384-0.621 g. of N per 100 g. of sugar fell into the range 0.250-0.400 g. during the past decade. In 1927 Andrlik defined the injurious N (*Listy Cukrovar.* 21, 500(1927)) as that N which is not removed by satn. and defecation and which finally enters the molasses; the injurious N was detd. from the total N minus the albumin N, the N as NH_3, and a half of the N in the form of amines (i. e., that N in an amine which when removed forms NH_3). From the content of the injurious N it was possible to predict the total quantity of molasses from the particular beets. Since later analyses showed that a large part (about a third) of the injurious N comes from betaine, an inert chem. substance which passes unchanged through all of the processes of sugar manuf., the Andrlik view became too rigid and although the injurious N characterized the sugar juices better than the total N characterized it, the injurious N did not measure the reactivity of the N substances in the juices. The systematic annual analyses of the past 20 yrs. have shown a const. relation between the amino acid content of juices and the stability or the fall of the alky. in the campaign; it has been possible to predict the course of the campaign from the preliminary amino acid detns. Recent analyses indicate that the amino acids are not the only reactive bodies, for the living beet is able to transform amino acids into amines and amines into amino acids according to its requirements. The reactions which predominate are glutamine to glutamic acid and asparagine to aspartic acid. In diffusion juices the amines predominate over a small quantity of amino acids, but during satn. much of the amine N is cleaved and the remainder of the mol. is left as an alk. (principally Ca) salt of amino acids; the amino acids predominate over the amines in satd. juices. The rapid colorimetric Stanĕk-Pavlas method (*C. A.* 29, 1300[9]) depends upon the fact that glutamine, glutamic acid, asparagine and aspartic acid in Cu acetate form a blue substance whose color is an index of the reactive amino acid N; the N which can be removed as NH_3 does not participate in the reaction. The N indicated by this test and expressed as "Blue nos." has been called the injurious N by Stanĕk; the correctness of this view has been confirmed by field and lab. tests during the past 2 seasons.

Frank Maresh

PROCESSES AND PROPERTIES INDEX

The drying of beet mash for analysis. Jiří Vondrák. *Listy Cukrovar.* 48, 447-51 (1930).—The drying of the mash occurs on the surface of large batches. Large specimens must be collected for the ratio of surface to vol. becomes smaller. A universal correction factor cannot be detd. The grinding has to be carried out rapidly in order to have no effect upon sugar content.

FRANK MARESH

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

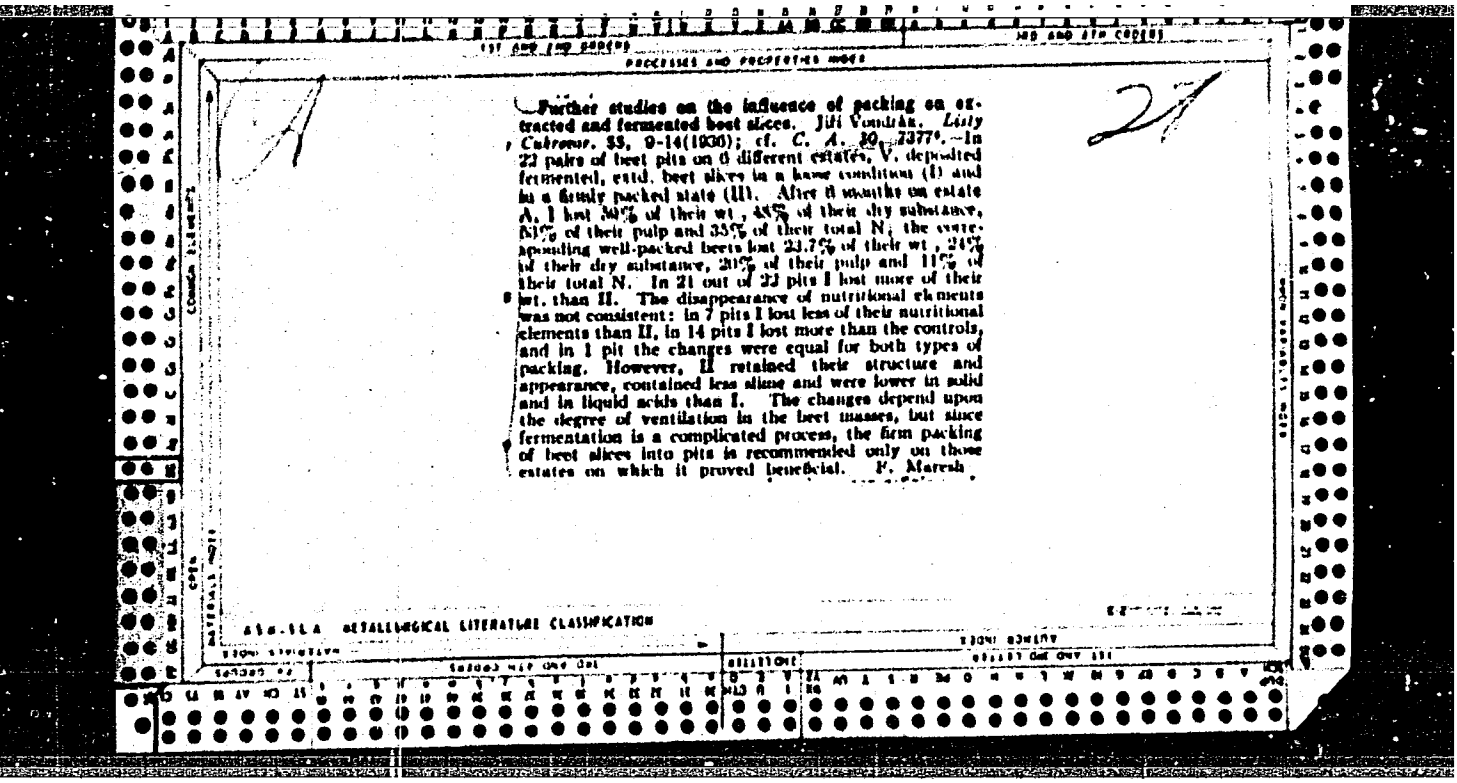
CA 28

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Drying of beet mash for increasing the digestibility of beets. Jiří Vondrák. *Listy Cukrovar.* 48, 580-90(1930).—A polemical discussion involving the size of specimen to be used in order to have minimal changes of evapn. during the analysis. O. Kopecký. *Ibid* 590-2.—A criticism of the foregoing. Cf. following abstr. FRANK MARESH

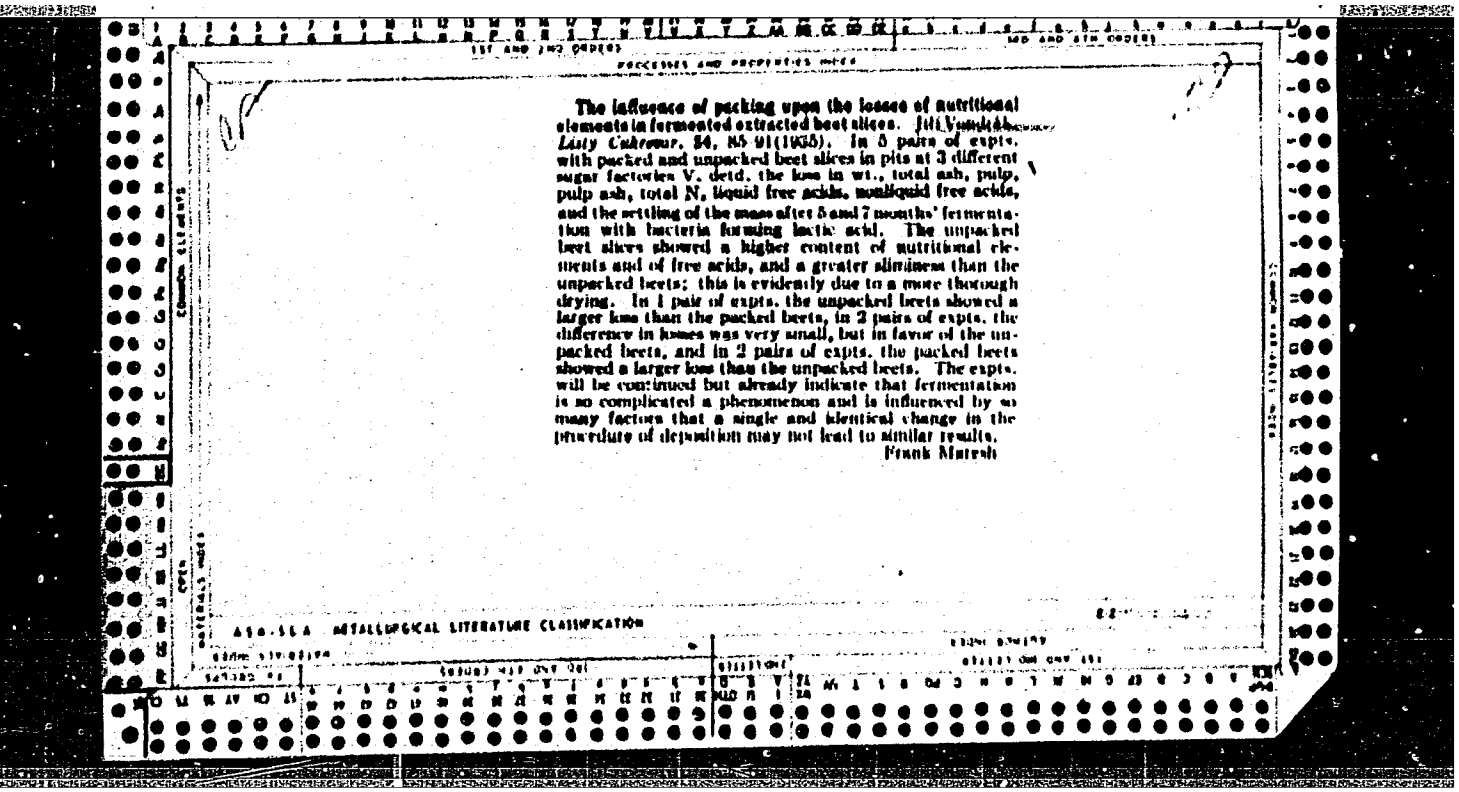
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

Further studies on the influence of packing on extracted and fermented beet slices. Jiří Vondrák. *Listy Cukrovar.* 53, 9-14(1936); cf. *C. A.* 30, 7377°.—In 22 pairs of beet pits on 6 different estates, V. deposited fermented, extd. beet slices in a loose condition (I) and in a firmly packed state (II). After 6 months on estate A, I lost 30% of their wt., 43% of their dry substance, 51% of their pulp and 35% of their total N; the corresponding well-packed beets lost 24.7% of their wt., 24% of their dry substance, 20% of their pulp and 11% of their total N. In 21 out of 22 pits I lost more of their wt. than II. The disappearance of nutritional elements was not consistent: in 7 pits I lost less of their nutritional elements than II, in 14 pits I lost more than the controls, and in 1 pit the changes were equal for both types of packing. However, II retained their structure and appearance, contained less slime and were lower in solid and in liquid acids than I. The changes depend upon the degree of ventilation in the beet masses, but since fermentation is a complicated process, the firm packing of beet slices into pits is recommended only on those estates on which it proved beneficial. F. Maresh

A1a-11A METALLURGICAL LITERATURE CLASSIFICATION



The influence of packing upon the losses of nutritional elements in fermented extracted beet slices. Jiří Vondřák. *Listy Cukrovar.* 54, 85-91(1935). In 5 pairs of expts. with packed and unpacked beet slices in pits at 3 different sugar factories V. detd. the loss in wt., total ash, pulp, pulp ash, total N, liquid free acids, nonliquid free acids, and the settling of the mass after 5 and 7 months' fermentation with bacteria forming lactic acid. The unpacked beet slices showed a higher content of nutritional elements and of free acids, and a greater sliminess than the unpacked beets; this is evidently due to a more thorough drying. In 1 pair of expts. the unpacked beets showed a larger loss than the packed beets, in 2 pairs of expts. the difference in losses was very small, but in favor of the unpacked beets, and in 2 pairs of expts. the packed beets showed a larger loss than the unpacked beets. The expts. will be continued but already indicate that fermentation is so complicated a phenomenon and is influenced by so many factors that a single and identical change in the procedure of deposition may not lead to similar results.
Frank Mutrsh

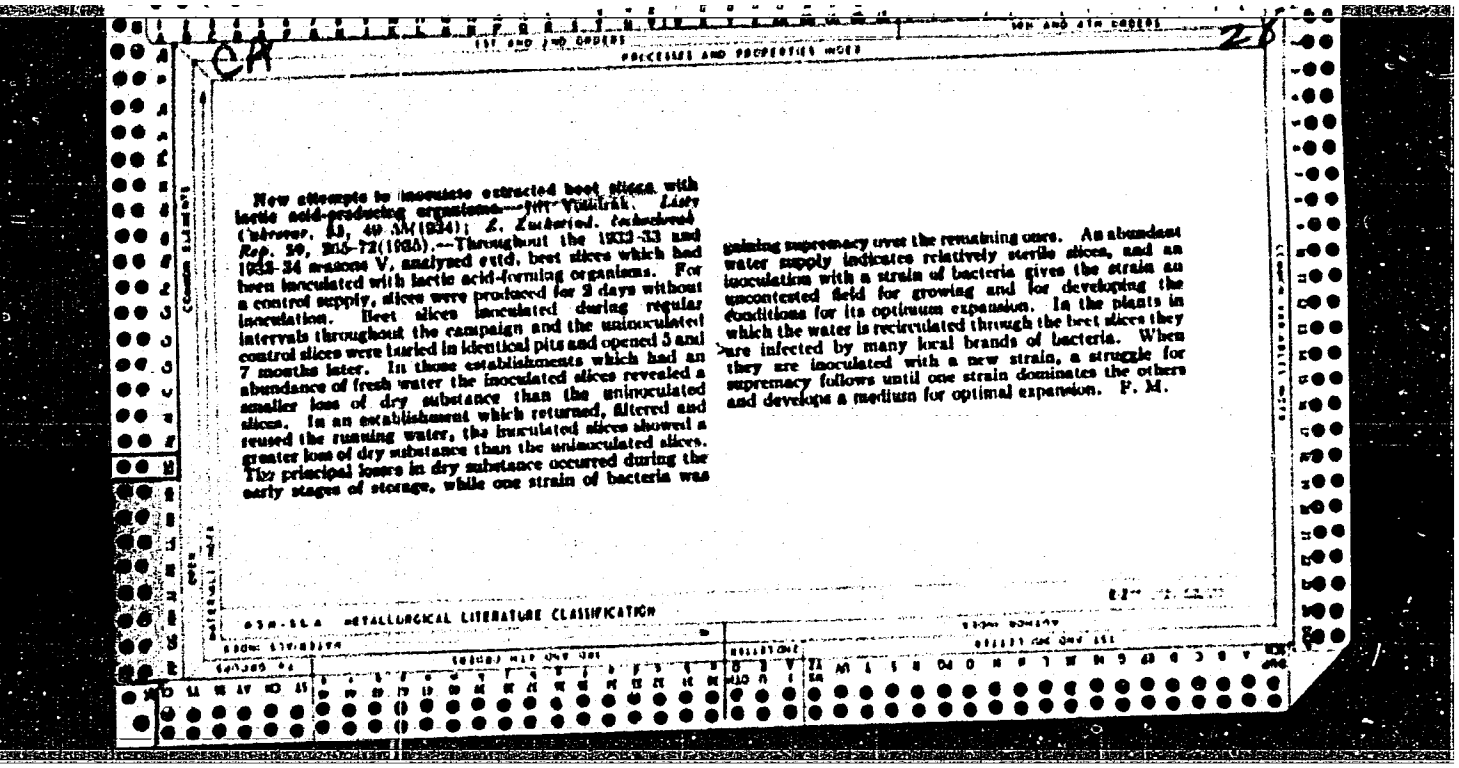
1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

New attempts to inoculate extracted beet slices with lactic acid-producing organisms. Jiří Vondrák. *Listy Cukrovar.* 53, 49-56(1934); *Intern. Sugar J.*; *Rep.* 39, 203-73(1935).—Throughout the 1932-33 and 1933-34 seasons V. analyzed extd. beet slices which had been inoculated with lactic acid-forming organisms. For a control supply, slices were produced for 2 days without inoculation. Beet slices inoculated during regular intervals throughout the campaign and the uninoculated control slices were buried in identical pits and opened 3 and 7 months later. In those establishments which had an abundance of fresh water the inoculated slices revealed a smaller loss of dry substance than the uninoculated slices. In an establishment which returned, filtered and reused the running water, the inoculated slices showed a greater loss of dry substance than the uninoculated slices. The principal losses in dry substance occurred during the early stages of storage, while one strain of bacteria was gaining supremacy over the remaining ones. An abundant water supply indicates relatively sterile slices, and an inoculation with a strain of bacteria gives the strain an uncontested field for growing and for developing the conditions for its optimum expansion. In the plants in which the water is recirculated through the beet slices they are infected by many local brands of bacteria. When they are inoculated with a new strain, a struggle for supremacy follows until one strain dominates the others and develops a medium for optimal expansion. F. M.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

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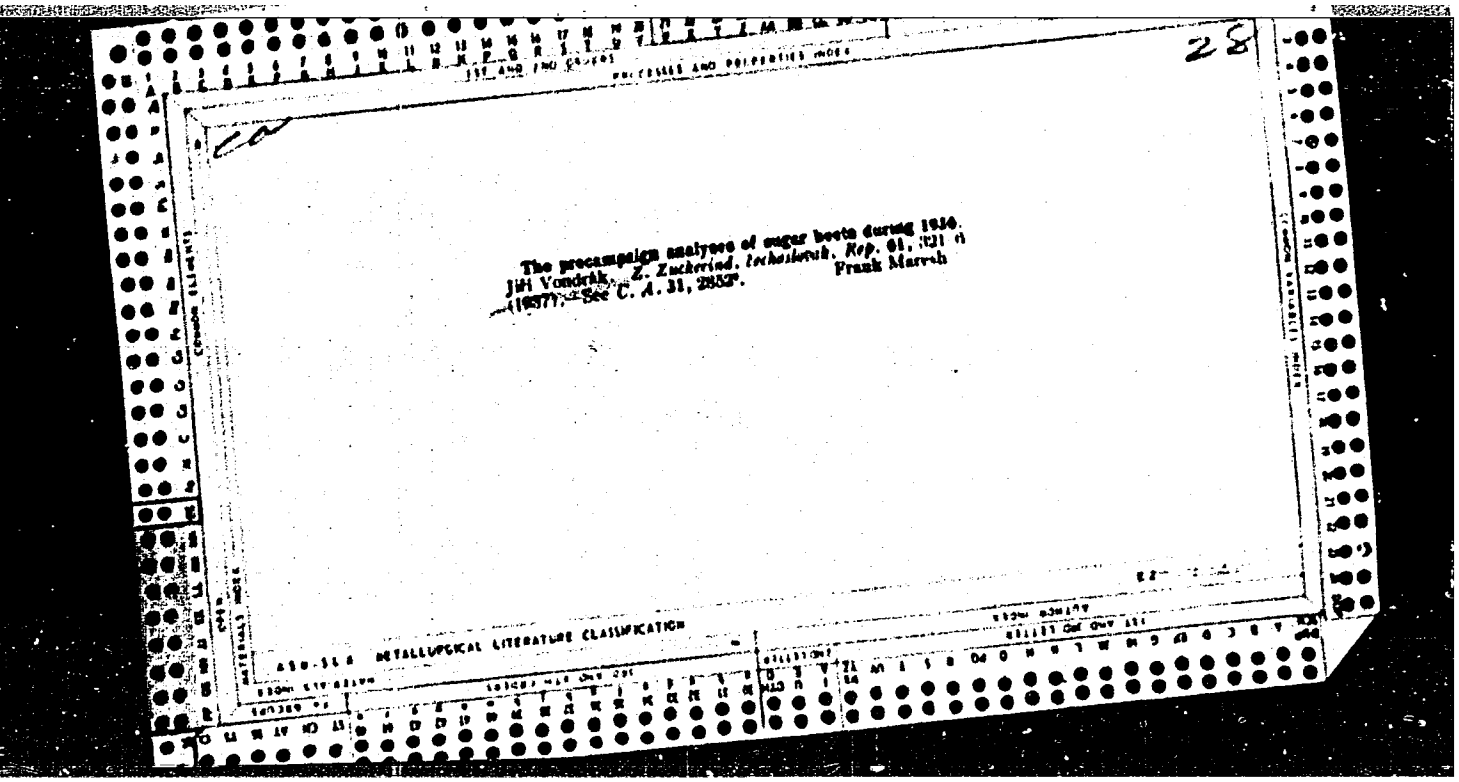
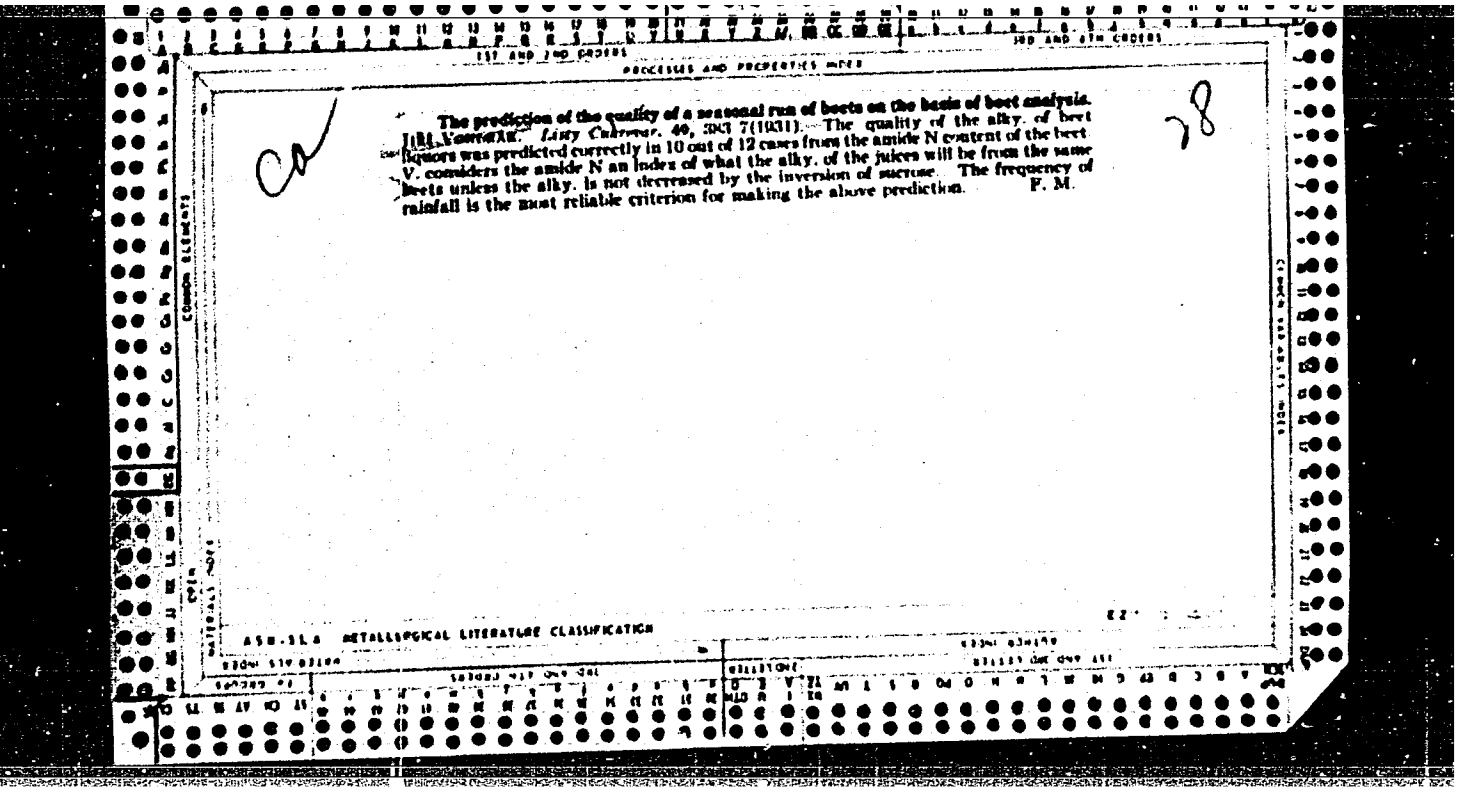
New attempts to inoculate extracted beet slices with lactic acid-producing organisms.—[illegible] *Listy Cukrovar.* 53, 49-54(1934); *Z. Zuckerind. tschechoslovak. Rep.* 59, 215-72(1935).—Throughout the 1933-33 and 1933-34 seasons V. analyzed extd. beet slices which had been inoculated with lactic acid-forming organisms. For a control supply, slices were produced for 2 days without inoculation. Beet slices inoculated during regular intervals throughout the campaign and the uninoculated control slices were buried in identical pits and opened 5 and 7 months later. In those establishments which had an abundance of fresh water the inoculated slices revealed a smaller loss of dry substance than the uninoculated slices. In an establishment which returned, filtered and reused the running water, the inoculated slices showed a greater loss of dry substance than the uninoculated slices. The principal losses in dry substance occurred during the early stages of storage, while one strain of bacteria was gaining supremacy over the remaining ones. An abundant water supply indicates relatively sterile slices, and an inoculation with a strain of bacteria gives the strain an uncontested field for growing and for developing the conditions for its optimum expansion. In the plants in which the water is recirculated through the beet slices they are infected by many local brands of bacteria. When they are inoculated with a new strain, a struggle for supremacy follows until one strain dominates the others and develops a medium for optimal expansion. P. M.

METALLURGICAL LITERATURE CLASSIFICATION





The prediction of the quality of a seasonal run of beets on the basis of beet analysis. [Bl.] Vavřínek. *Listy Cukrovar.* 49, 393 7(1931).—The quality of the alky. of beet liquors was predicted correctly in 10 out of 12 cases from the amide N content of the beet. V. considers the amide N an index of what the alky. of the juices will be from the same beets unless the alky. is not decreased by the inversion of sucrose. The frequency of rainfall is the most reliable criterion for making the above prediction. F. M.

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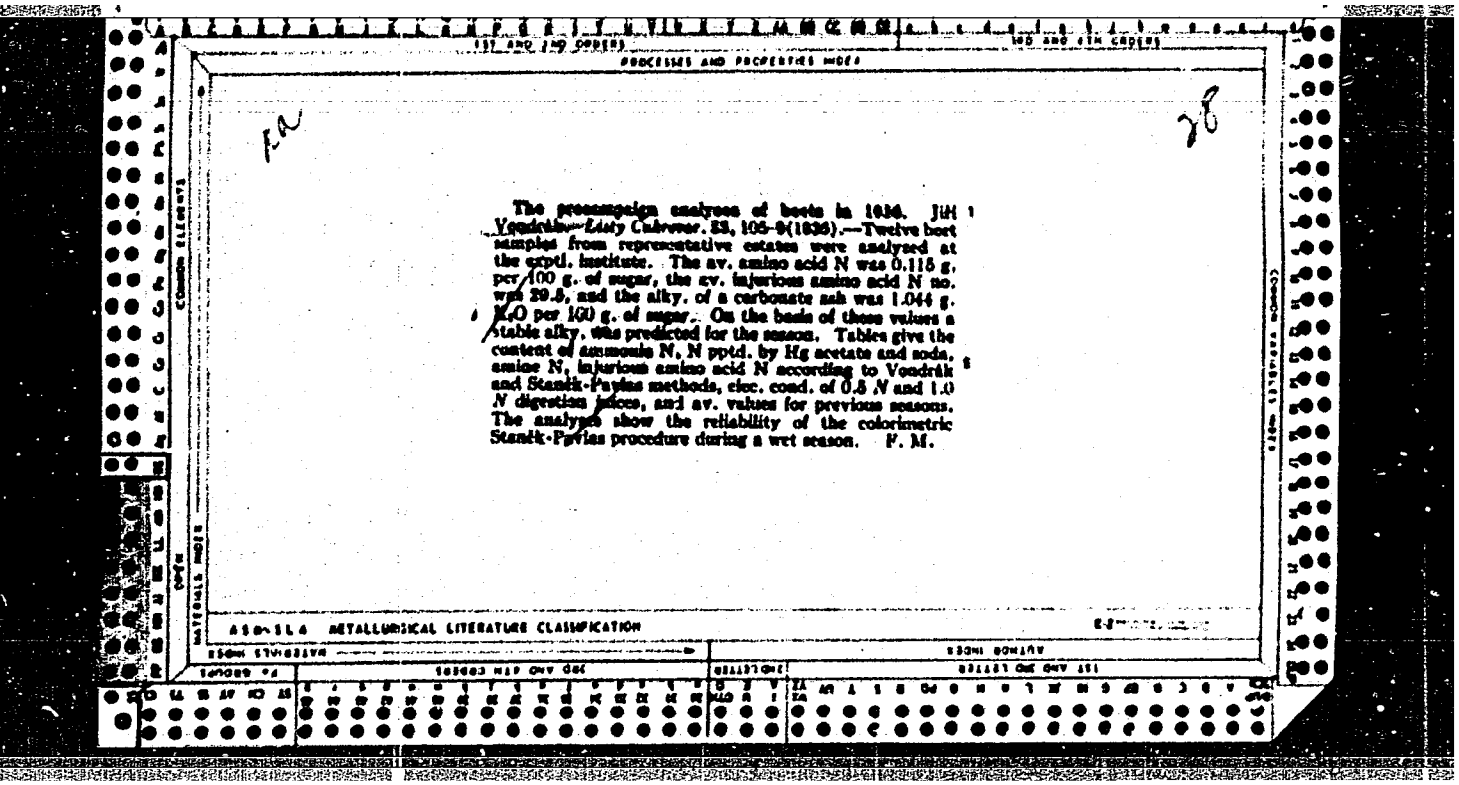
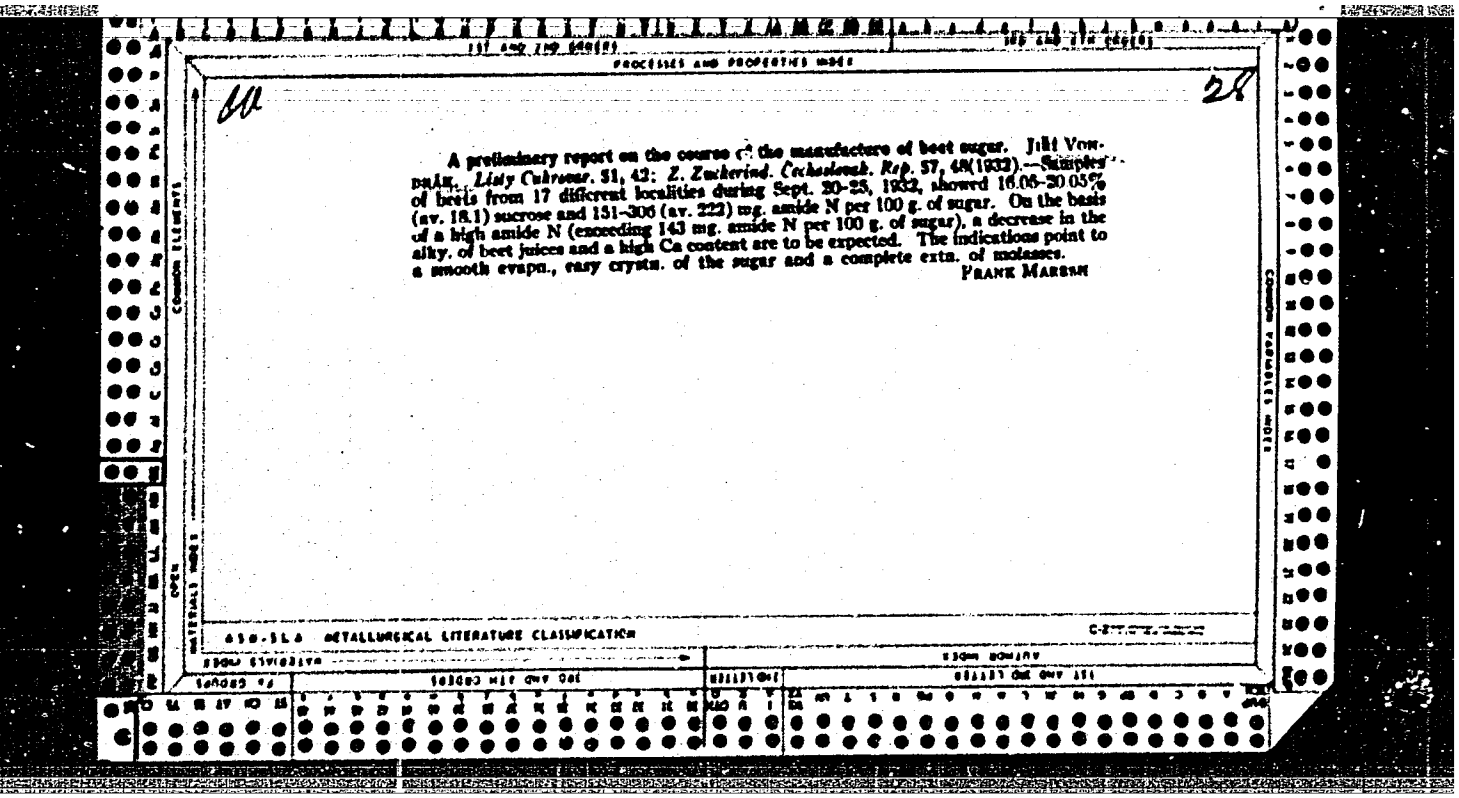
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

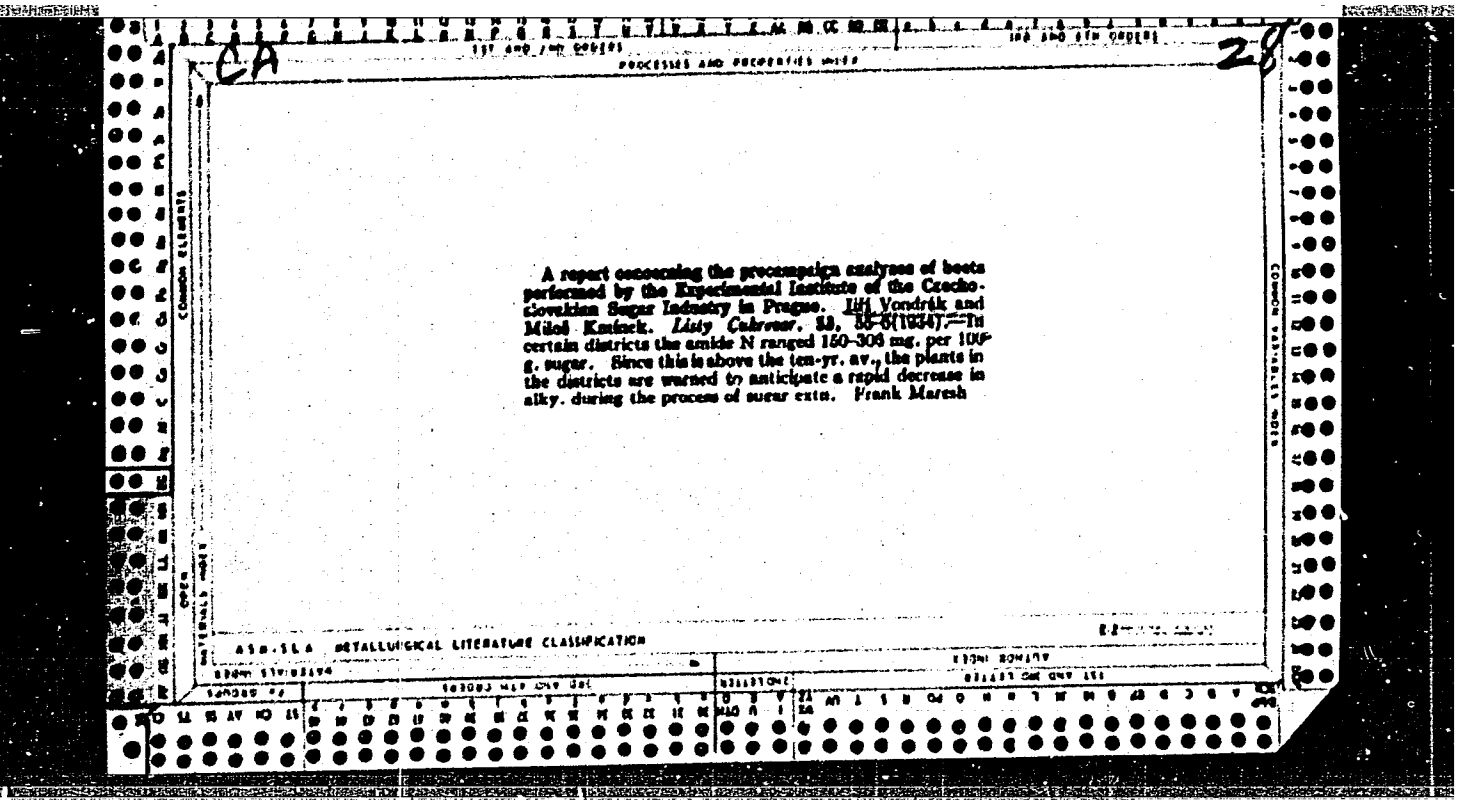


The preseason analyses of beets in 1936. JIH Vondrák—*Listy Cukrovar.* 53, 105-9(1936).—Twelve beet samples from representative estates were analyzed at the exptl. institute. The av. amino acid N was 0.115 g. per 100 g. of sugar, the av. injurious amino acid N no. was 29.5, and the alky. of a carbonate ash was 1.044 g. K_2O per 100 g. of sugar. On the basis of these values a stable alky. was predicted for the season. Tables give the content of ammonia N, N ppta. by Hg acetate and soda, amino N, injurious amino acid N according to Vondrák and Stanik-Pavlas methods, elec. cond. of 0.5 *N* and 1.0 *N* digestion juices, and av. values for previous seasons. The analyses show the reliability of the colorimetric Stanik-Pavlas procedure during a wet season. F. M.

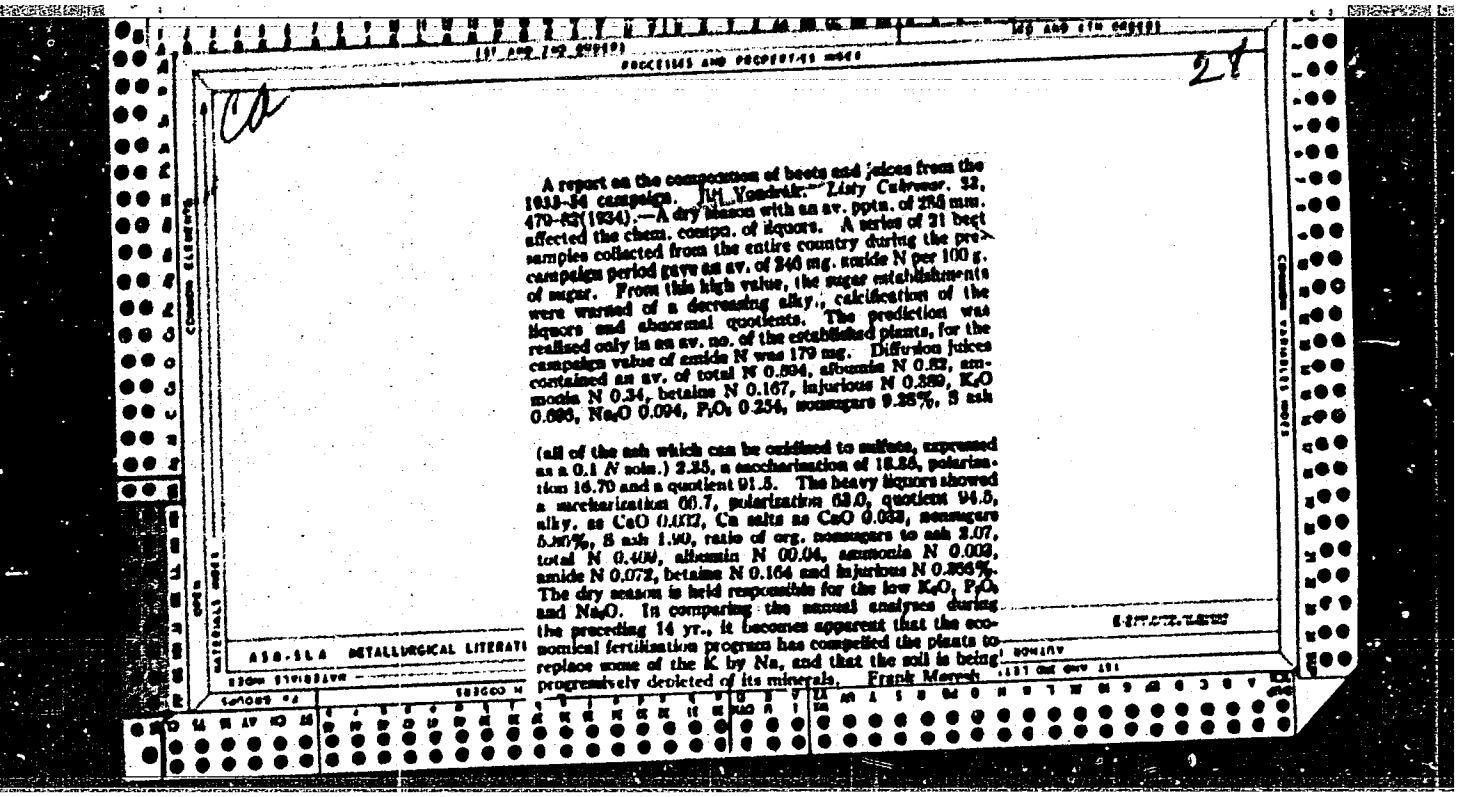


A preliminary report on the course of the manufacture of beet sugar. Jiří Vondrák. *Listy Cukrovar.* 51, 42; *Z. Zuckerind. Cechoslovak. Rep.* 57, 48(1932).—Samples of beets from 17 different localities during Sept. 20-25, 1932, showed 16.06-20.05% (av. 18.1) sucrose and 151-306 (av. 222) mg. amide N per 100 g. of sugar. On the basis of a high amide N (exceeding 143 mg. amide N per 100 g. of sugar), a decrease in the silty. of beet juices and a high Ca content are to be expected. The indications point to a smooth evapn., easy crystn. of the sugar and a complete extn. of molasses.

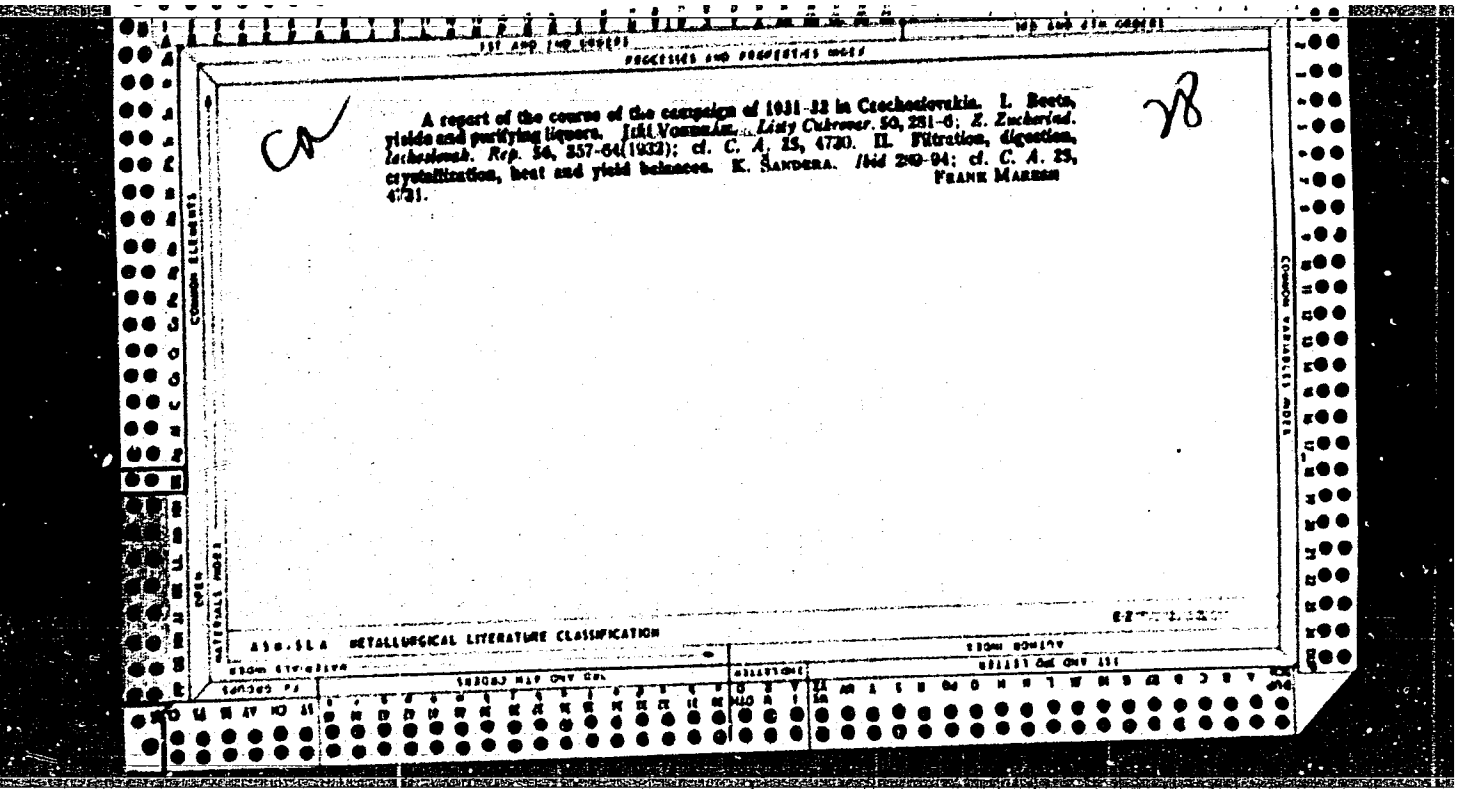
FRANK MARSIK



A report concerning the precampaign analyses of beets performed by the Experimental Institute of the Czechoslovakian Sugar Industry in Prague. Jiří Vondrák and Miloš Knížek. *Listy Cukrovar.* 53, 55-8(1934).—In certain districts the amide N ranged 150–300 mg. per 100 g. sugar. Since this is above the ten-yr. av., the plants in the districts are warned to anticipate a rapid decrease in alky. during the process of sugar extn. Frank Maresh



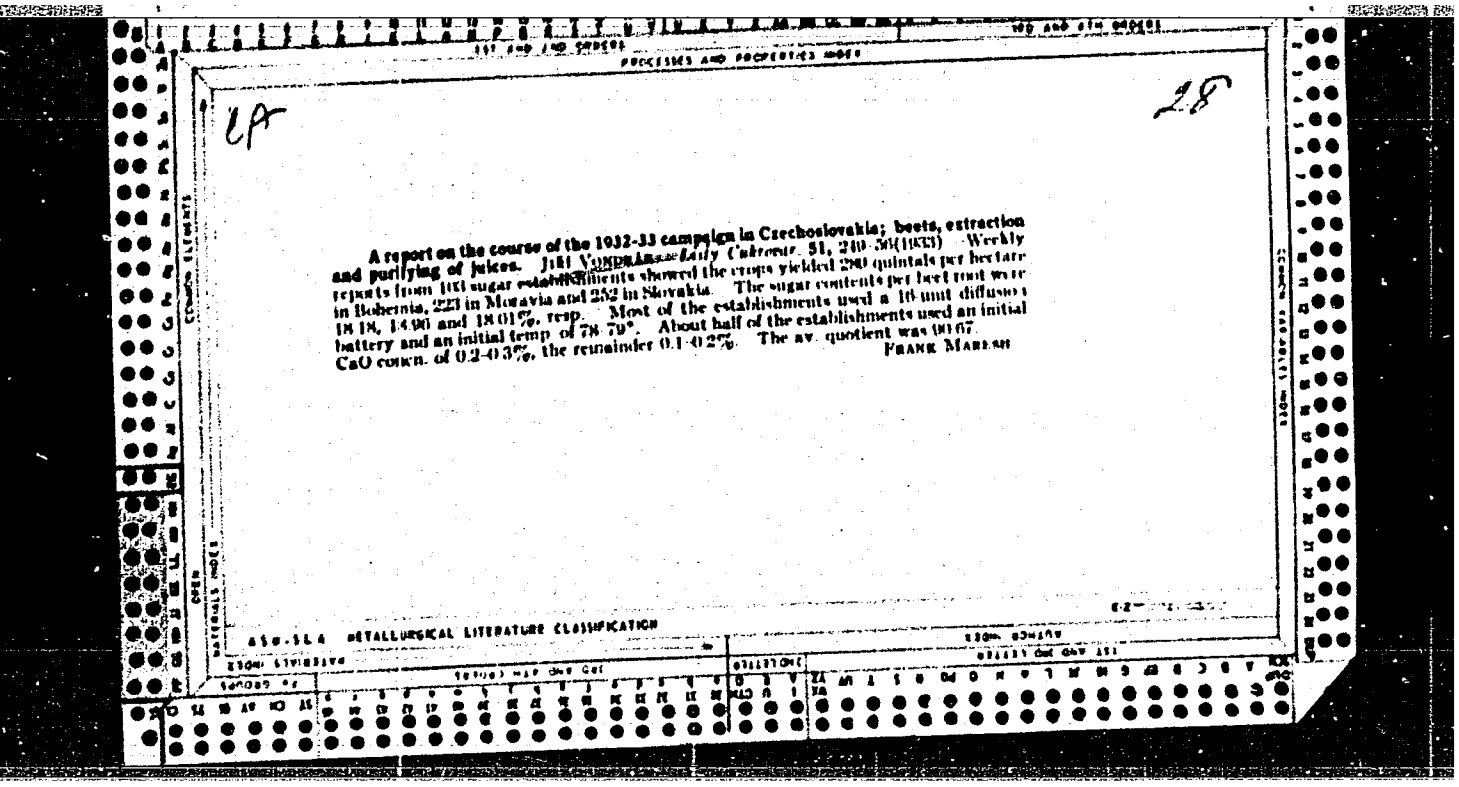
A report on the composition of beets and juices from the 1933-34 campaign. J.H. Vondrák. *Listy Cukrovar.* 52, 479-82(1934).—A dry season with an av. ppta. of 288 mm. affected the chem. compn. of liquors. A series of 21 beet samples collected from the entire country during the pre- campaign period gave an av. of 240 mg. amide N per 100 g. of sugar. From this high value, the sugar establishments were warned of a decreasing alky., calcification of the liquors and abnormal quotients. The prediction was realized only in an av. no. of the established plants, for the campaign value of amide N was 179 mg. Diffusion juices contained an av. of total N 0.594, albumin N 0.82, ammonia N 0.34, betaine N 0.167, injurious N 0.389, K_2O 0.686, Na_2O 0.094, P_2O_5 0.254, nonsugars 9.28%, S ash (all of the ash which can be oxidized to sulfate, expressed as a 0.1 *N* soln.) 2.35, a saccharization of 18.26, polarization 16.70 and a quotient 91.5. The heavy liquors showed a saccharization 66.7, polarization 63.0, quotient 94.5, alky. as CaO 0.432, Ca salts as CaO 0.033, nonsugars 5.80%, S ash 1.90, ratio of org. nonsugars to ash 2.07, total N 0.400, albumin N 00.04, ammonia N 0.003, amide N 0.072, betaine N 0.164 and injurious N 0.256%. The dry season is held responsible for the low K_2O, P_2O_5 and Na_2O. In comparing the annual analyses during the preceding 14 yr., it becomes apparent that the economical fertilization program has compelled the plants to replace some of the K by Na, and that the soil is being progressively depleted of its minerals. Frank Meresh



A report of the course of the campaign of 1931-32 in Czechoslovakia. I. Beets, yields and purifying liquors. Jiří Vondrák. *Listy Cukrovar.* 50, 281-6; *Z. Zuckerind. Tschechoslovak. Rep.* 56, 357-64(1932); cf. *C. A.* 25, 4730. II. Filtration, digestion, crystallization, heat and yield balances. K. Sandera. *Ibid* 249-94; cf. *C. A.* 25, 4731.

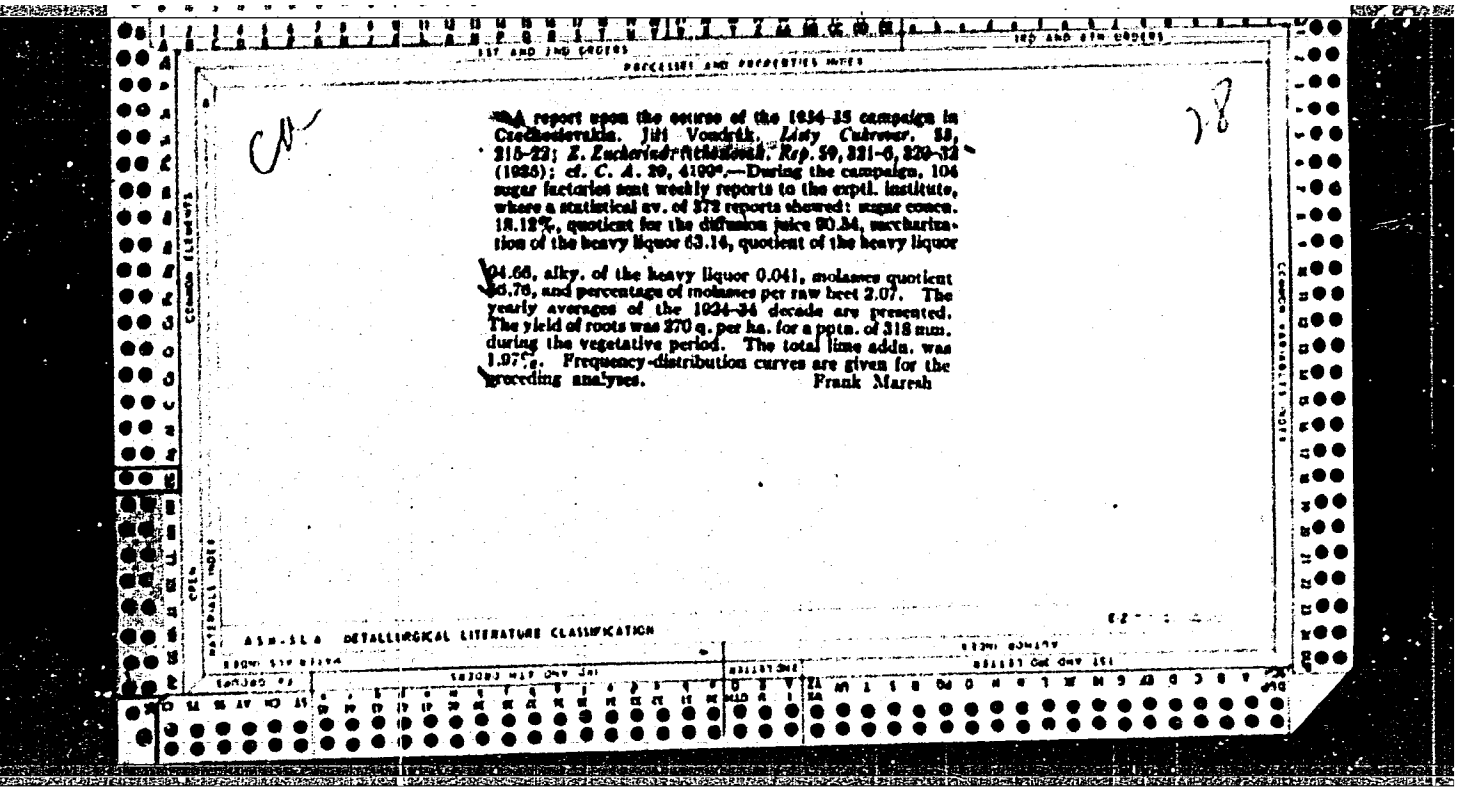
FRANK MARSON

A150-51A METALLURGICAL LITERATURE CLASSIFICATION

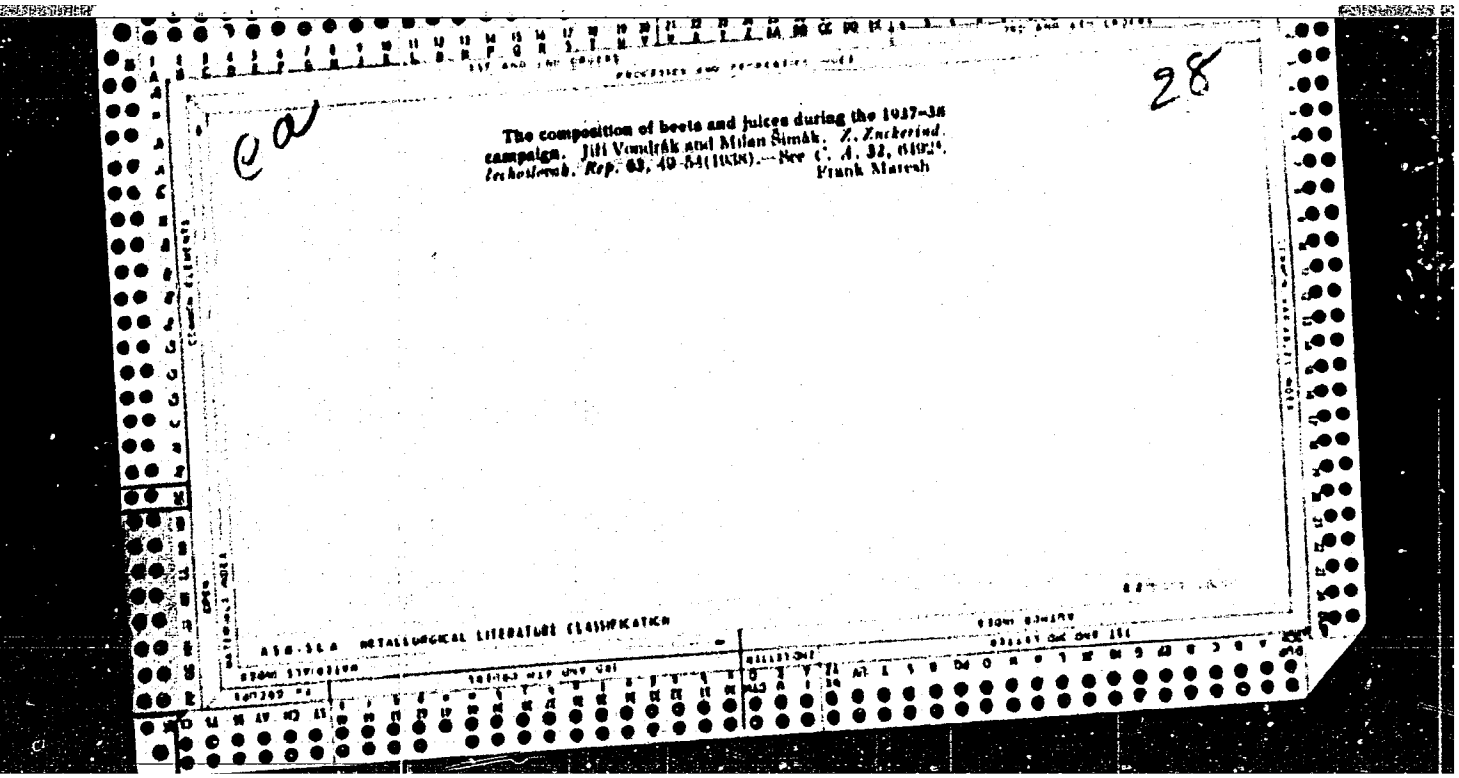


A report on the course of the 1932-33 campaign in Czechoslovakia; beets, extraction and purifying of juices. Jiří Vondrák. *Listy Cukrovar.* 51, 240-50(1933). Weekly reports from 161 sugar establishments showed the crops yielded 280 quintals per hectare in Bohemia, 223 in Moravia and 252 in Slovakia. The sugar contents per beet root were 18.18, 14.90 and 18.01%, resp. Most of the establishments used a 10-unit diffusion battery and an initial temp. of 78-79°. About half of the establishments used an initial CaO content of 0.2-0.3%, the remainder 0.1-0.2%. The av. quotient was 90.67.

FRANK MARLAN



A report upon the course of the 1934–35 campaign in Czechoslovakia. Jiří Vondrák, *Listy Cukrovar.* 53, 215–22; *Z. Zuckerind. Cechoslovak. Rep.* 59, 331–6, 329–32 (1935); *cf. C. A.* 29, 4199⁹.—During the campaign, 104 sugar factories sent weekly reports to the expt. institute, where a statistical av. of 372 reports showed: sugar concn. 18.12%, quotient for the diffusion juice 90.34, saccharization of the heavy liquor 63.14, quotient of the heavy liquor 94.66, alky. of the heavy liquor 0.041, molasses quotient 56.76, and percentage of molasses per raw beet 2.07. The yearly averages of the 1924–34 decade are presented. The yield of roots was 270 q. per ha. for a ppte. of 318 mm. during the vegetative period. The total lime addn. was 1.97%. Frequency-distribution curves are given for the preceding analyses. Frank Maresh



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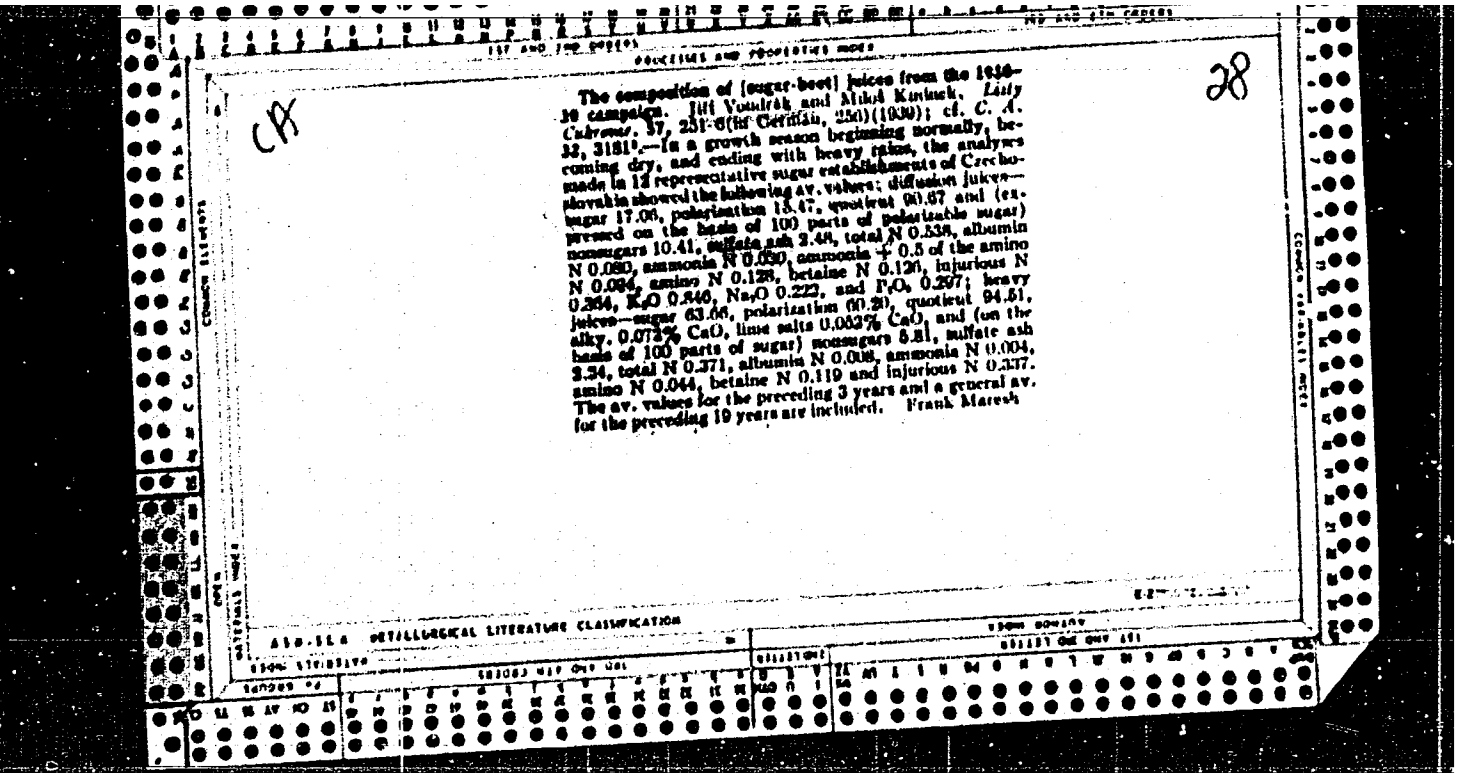
ca

The composition of beets and juices during the 1937–38 campaign. Jiří Vondrák and Milan Šimák. *Z. Zuckerind. Tschechoslowak. Rep.* 63, 49–54(1938).—See *C. A.* 32, 6492⁹. Frank Matrah



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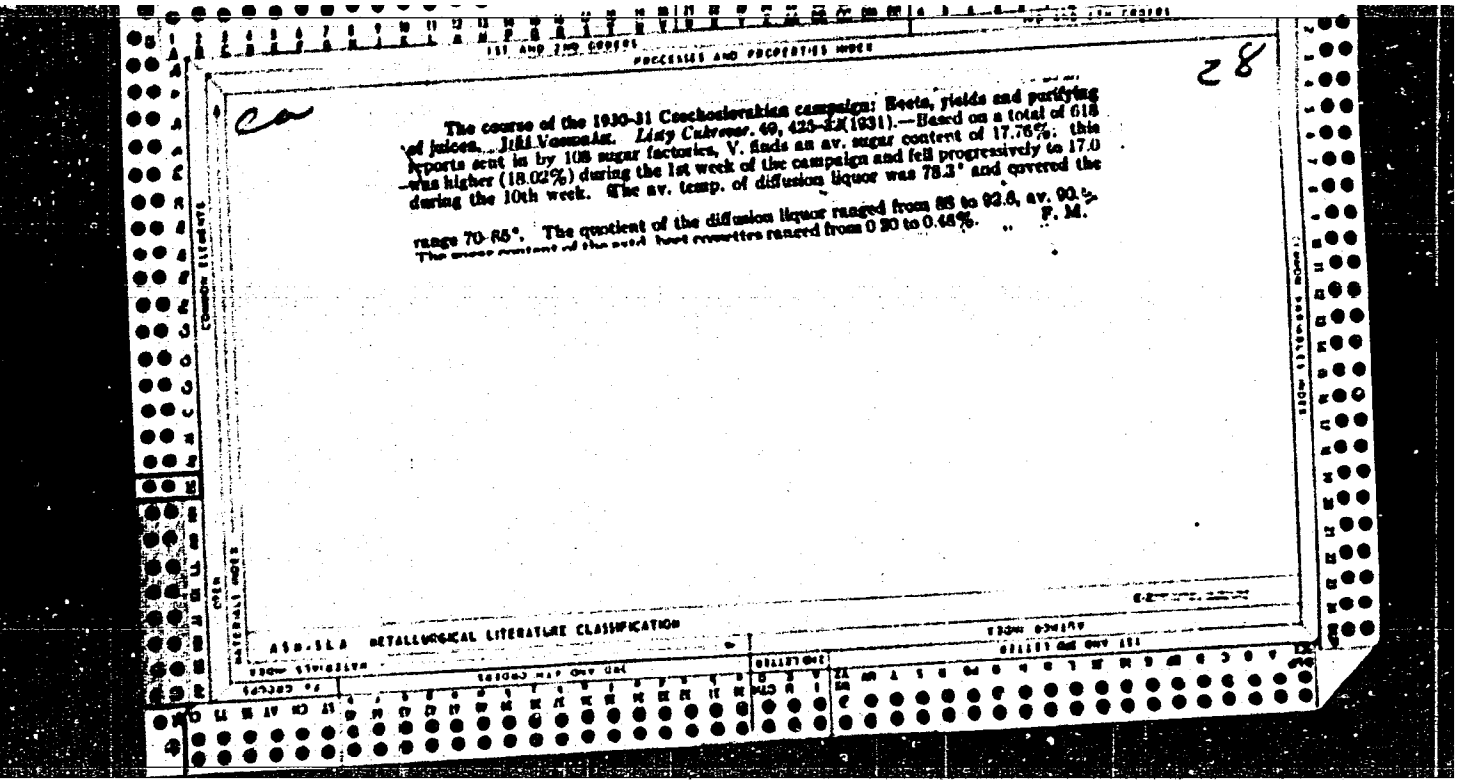
28

The composition of [sugar-beet] juices from the 1936-39 campaign. Jiří Vondrák and Miloš Kuriuek. *Listy Cukrovar.* 57, 231-6(in Czechish, 250)(1939); cf. *C. A.* 32, 3181⁹.—In a growth season beginning normally, becoming dry, and ending with heavy rains, the analyses made in 12 representative sugar establishments of Czechoslovakia showed the following av. values: diffusion juices—sugar 17.06, polarization 15.47, quotient 90.67 and (expressed on the basis of 100 parts of polarizable sugar) monosugars 10.41, sulfate ash 3.48, total N 0.538, albumin N 0.080, ammonia N 0.030, ammonia + 0.5 of the amino N 0.084, amino N 0.128, betaine N 0.120, injurious N 0.264, K_2O 0.846, Na_2O 0.223, and P_2O_5 0.297; heavy juices—sugar 63.66, polarization 60.20, quotient 94.61, alky. 0.072% CaO, lime salts 0.052% CaO, and (on the basis of 100 parts of sugar) monosugars 5.81, sulfate ash 3.34, total N 0.371, albumin N 0.088, ammonia N 0.004, amino N 0.044, betaine N 0.119 and injurious N 0.337. The av. values for the preceding 3 years and a general av. for the preceding 19 years are included. Frank Maresh

A50-SL4 METALLURGICAL LITERATURE CLASSIFICATION



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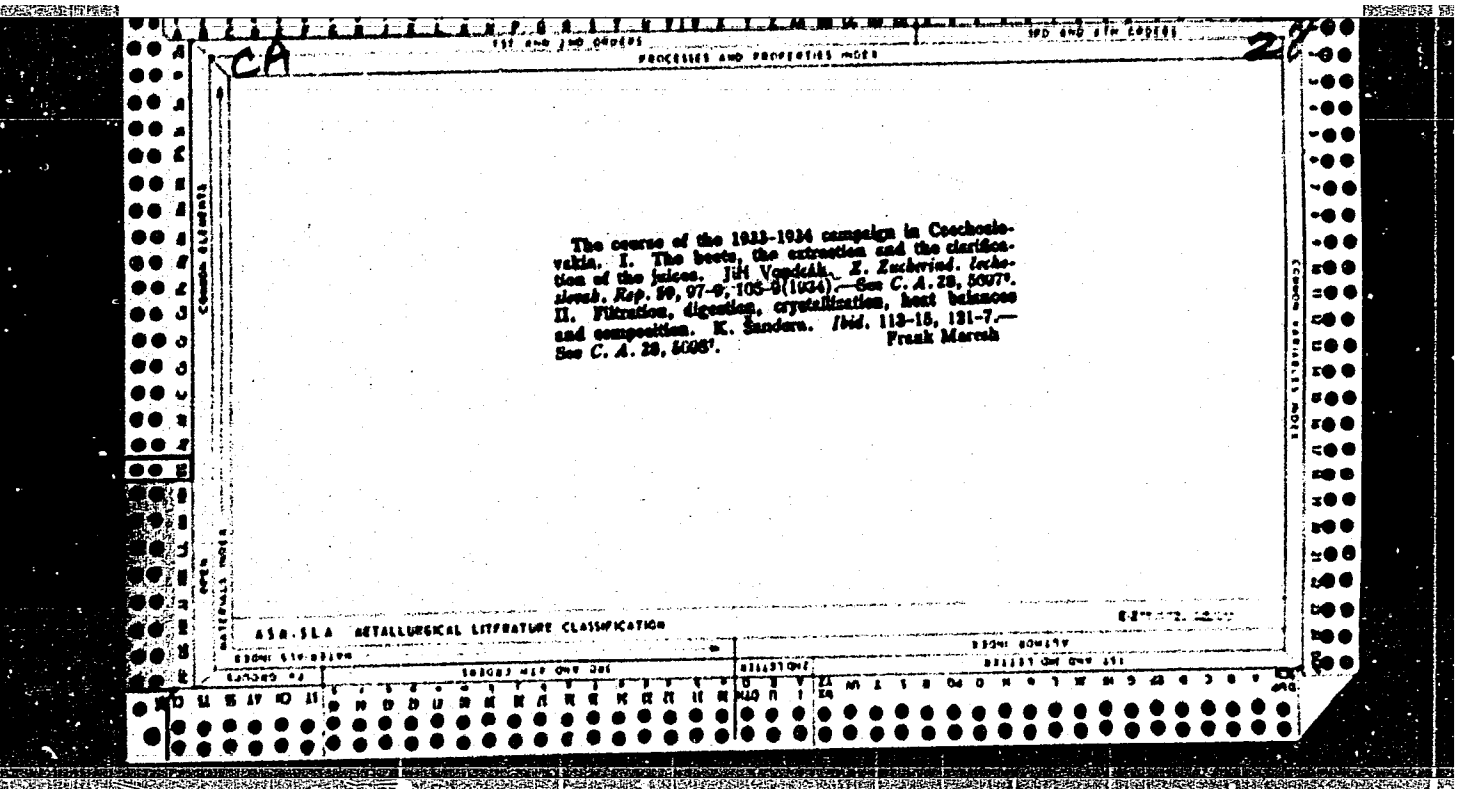
The course of the 1930-31 Czechoslovakian campaign: Beets, yields and purifying of juices. Jiří Vondrák. *Listy Cukrovar.* 49, 425-32(1931).—Based on a total of 618 reports sent in by 108 sugar factories, V. finds an av. sugar content of 17.76%; this was higher (18.02%) during the 1st week of the campaign and fell progressively to 17.0 during the 10th week. The av. temp. of diffusion liquor was 78.2° and covered the range 70-85°. The quotient of the diffusion liquor ranged from 88 to 92.6, av. 90.5. The sugar content of the used beet cossettes ranged from 0.20 to 0.48%. F. M.

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION



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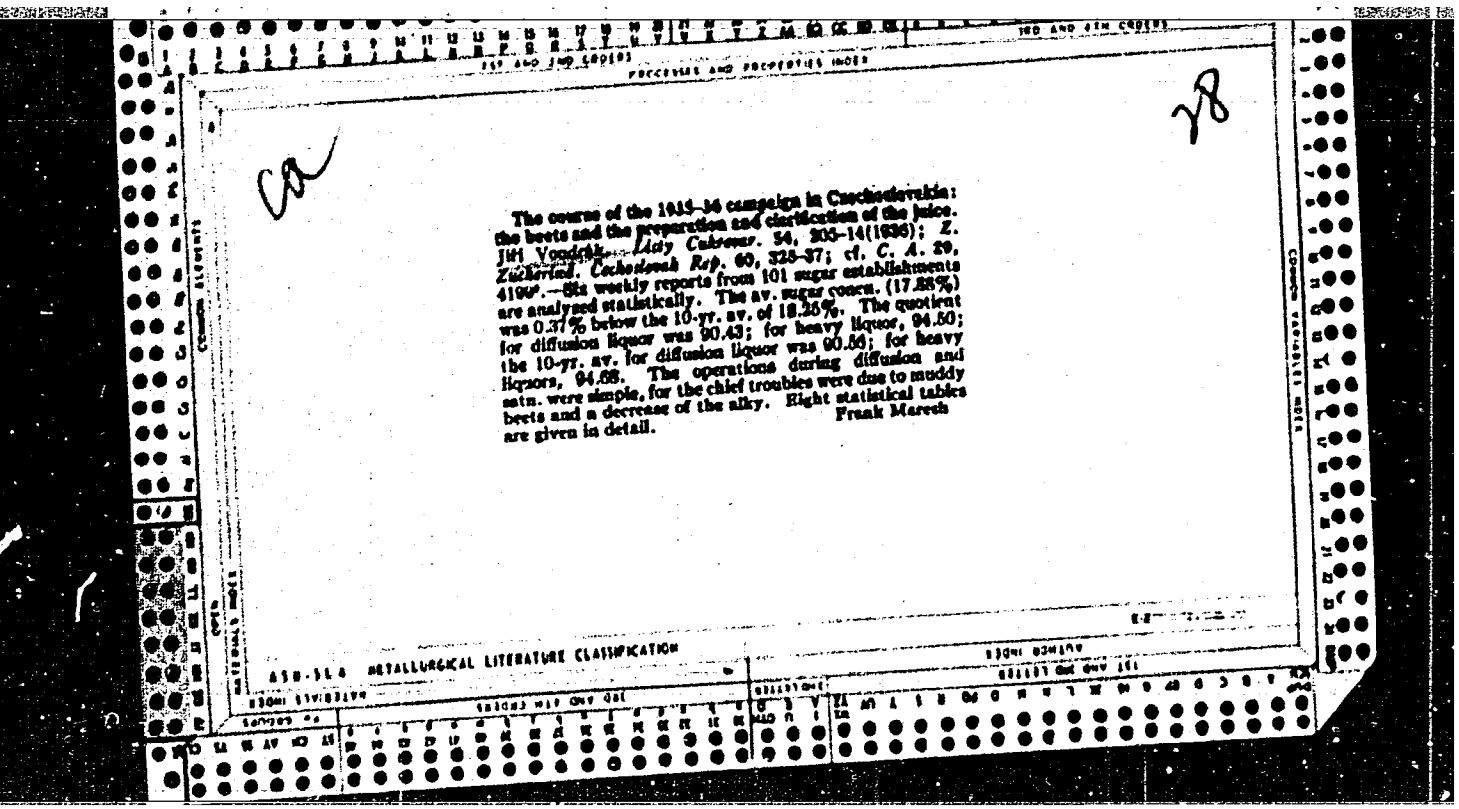
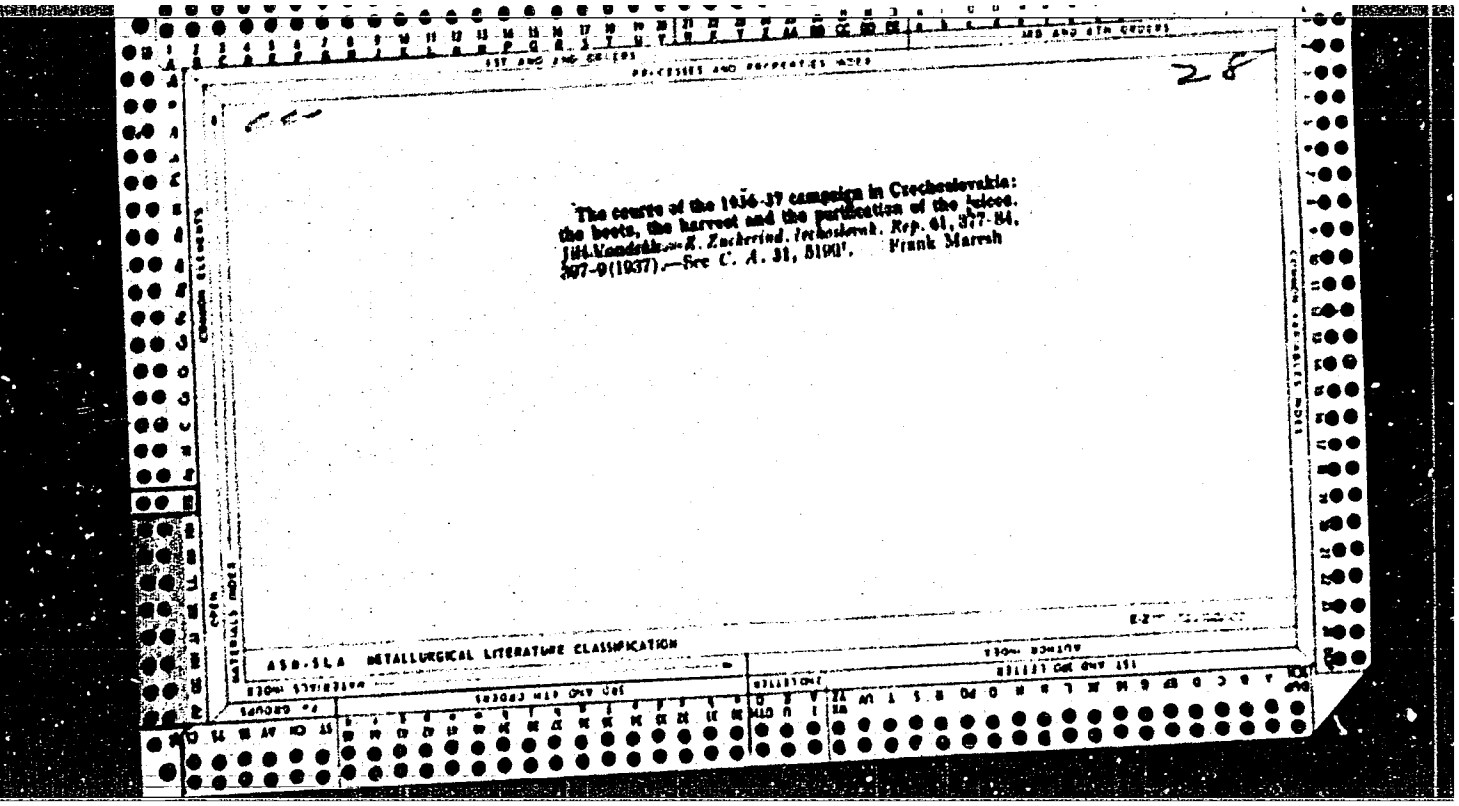
The course of the 1933-1934 campaign in Czechoslovakia. I. The beets, the extraction and the clarification of the juices. Jiří Vondrák. *Z. Zuckerind. tschechoslovak. Rep.* 59, 97-9, 105-9(1934).—See *C. A.* 28, 5097⁹. II. Filtration, digestion, crystallization, heat balances and composition. K. Sanders. *Ibid.* 113-15, 121-7.—See *C. A.* 28, 5098¹. Frank Marsh

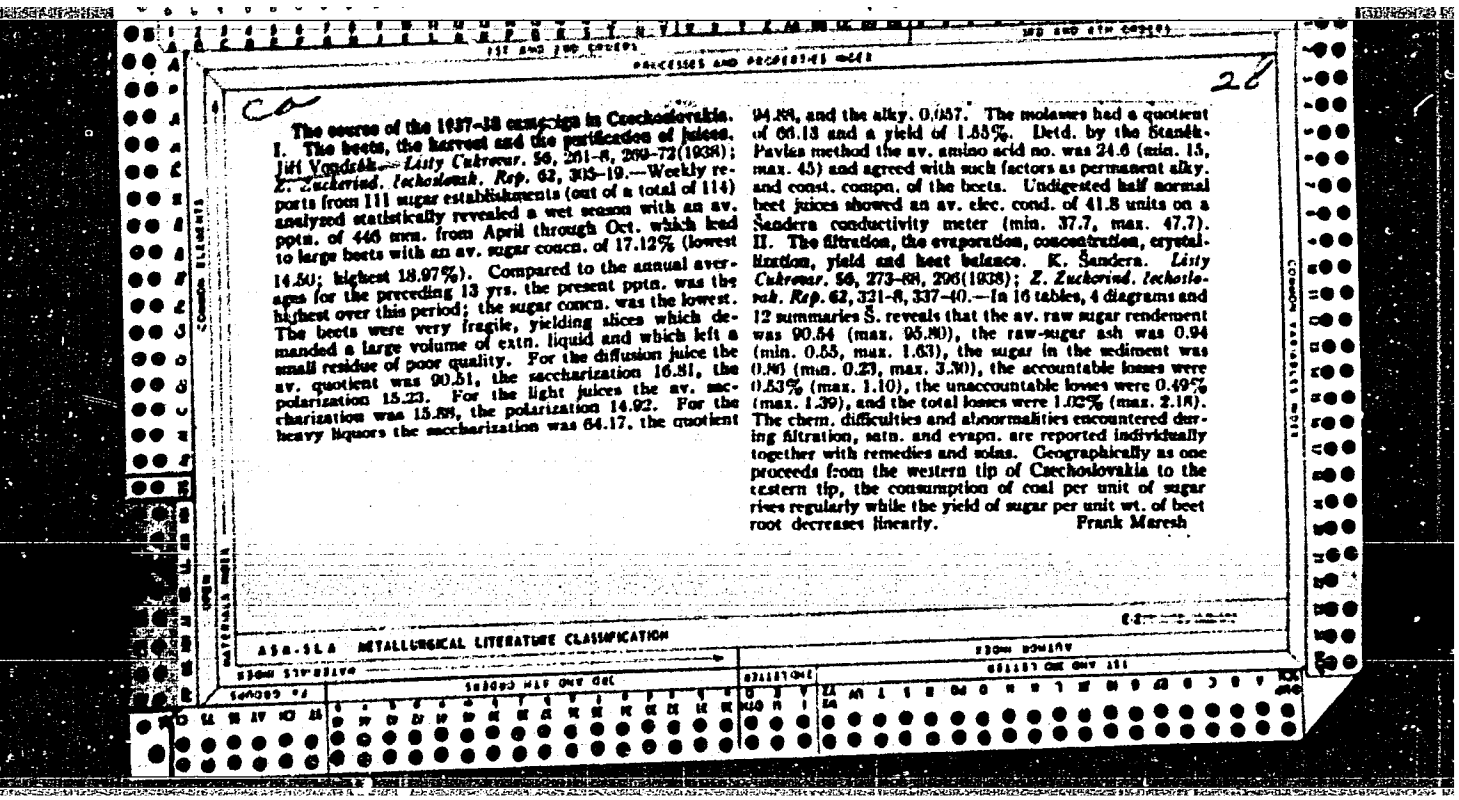
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The course of the 1935–36 campaign in Czechoslovakia: the beets and the preparation and clarification of the juice. Jiří Vondrák. *Listy Cukrovar.* 54, 305–14(1936); Z. Zuckerind. *Cechoslovak Rep.* 60, 325–37; cf. *C. A.* 29, 4190⁹.—Its weekly reports from 101 sugar establishments are analyzed statistically. The av. sugar concn. (17.88%) was 0.37% below the 10-yr. av. of 18.25%. The quotient for diffusion liquor was 90.43; for heavy liquor, 94.50; the 10-yr. av. for diffusion liquor was 90.56; for heavy liqnors, 94.68. The operations during diffusion and satn. were simple, for the chief troubles were due to muddy beets and a decrease of the alky. Eight statistical tables are given in detail.

Frank Mareeh





The course of the 1937-38 campaign in Czechoslovakia. I. The beets, the harvest and the purification of juices. Jiří Vondák.—*Listy Cukrovar.* 56, 261–8, 269–72(1938); *Z. Zuckerind. Tschechoslovak. Rep.* 62, 303–19.—Weekly reports from 111 sugar establishments (out of a total of 114) analyzed statistically revealed a wet season with an av. ppts. of 446 mm. from April through Oct. which led to large beets with an av. sugar concn. of 17.12% (lowest 14.50; highest 18.97%). Compared to the annual averages for the preceding 13 yrs. the present ppts. was the highest over this period; the sugar concn. was the lowest. The beets were very fragile, yielding slices which demanded a large volume of extn. liquid and which left a small residue of poor quality. For the diffusion juice the av. quotient was 90.51, the saccharization 16.81, the polarization 15.23. For the light juices the av. saccharization was 15.88, the polarization 14.92. For the heavy liquors the saccharization was 64.17, the quotient 94.88, and the alky. 0.057. The molasses had a quotient of 66.13 and a yield of 1.55%. Detd. by the Standk.-Pavlas method the av. amino acid no. was 24.6 (min. 15, max. 45) and agreed with such factors as permanent alky. and const. compn. of the beets. Undigested half normal beet juices showed an av. elec. cond. of 41.8 units on a Sandera conductivity meter (min. 37.7, max. 47.7). II. The filtration, the evaporation, concentration, crystallization, yield and heat balance. K. Šandera. *Listy Cukrovar.* 56, 273–88, 296(1938); *Z. Zuckerind. Tschechoslovak. Rep.* 62, 321–8, 337–40.—In 16 tables, 4 diagrams and 12 summaries Š. reveals that the av. raw sugar rendement was 90.54 (max. 95.80), the raw-sugar ash was 0.94 (min. 0.55, max. 1.63), the sugar in the sediment was 0.80 (min. 0.23, max. 3.30), the accountable losses were 0.53% (max. 1.10), the unaccountable losses were 0.49% (max. 1.39), and the total losses were 1.02% (max. 2.18). The chem. difficulties and abnormalities encountered during filtration, satn. and evapn. are reported individually together with remedies and solns. Geographically as one proceeds from the western tip of Czechoslovakia to the eastern tip, the consumption of coal per unit of sugar rises regularly while the yield of sugar per unit wt. of beet root decreases linearly. Frank Maresh

BALEJ, J.; PASEKA, I.; VONDRAK, J.; KOUDELKA, V.; KRONER, A.

Study on the electrochemical production of chlorine and acids.
Chem prum 14 no.11:576-581 N '64.

1. Institute of Inorganic Chemistry, Czechoslovak Academy of Sciences, Prague.

VONDRAK, JUL.

TECHNOLOGY

VONDRAK, JUL. Novodobe prepinace regulacnich transformatoru. 7 p.

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

VONDRAK, Oldrich; inz.

Polish exhibition of railroad cars on Poznan Fair. Zel dop tech 10 no.9:586 '62.

VONDRAK, V.

Production of chemically hardened cores for iron castings in the Stalingrad Plant of the CKD Works. p. 299.

SLEVARENSTVI. (Ministerstvo tezkeho strojirenstvi a Ceskoslovenska vedecka technicka spolecnost pro hunictvi a slevarenstvi) Praha, Czechoslovakia. Vol. 7, no. 7, June 1959

Monthly list of East European Accessions (EEAI) LC Vol. 8, No. 12, Dec., 1959 Uncl.

KOUTSKY, Jaroslav; VONDRAK, Zdenek; CHLOUPKOVA, Karla; MATEJICEK, Valdimir

Autonomic profile of schizophrenia. Cas. lek. cesk. 97 no.30: 938-943 18 July 58.

1. Stani lecebna psychiatricka, Jihlava, red. prim. Dr. Vilem Kotina. J. K., Jinlava, Dlouha stezka I.
(SCHIZOPHRENIA, physiol.
autonomic NS (Cz))
(AUTONOMIC NERVOUS SYSTEM, in var. dis.
schizophrenia (Cz))

Vondrak, Z.

Further development and improvement of the "Days for New Technology" in the building industry. p. 468. INZENYRSKE STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 4, no. 20, Nov. 1954.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

KOUTSKY, Jaroslav; VONDRAK, Zdenek

Autonomic system in neurotic and normal persons. Cas. lek. cesk. 46 no.10:303-307 8 Mar 57.

1. Statni psychiatricka lecebna Jihlava, prim. Dr. Vilem Kotina. J. K., Jihlava, Dlouha stezka 1.
(AUTONOMIC NERVOUS SYSTEM, in var. dis.
neurosis, comparison with normal persons (Cz))
(NEUROSES, physiol.
autonomic NS, comparison with normal persons (Cz))

VONDRAK, Z.

Modern Techology Days. p. 253.
(INZENYRSKE STAVBY, vol. 3, no.8, Aug. 1954, Praha)

SO: Monthly List of East European Accession,(EEAL), LC, Vol. 4, No. 11, Nov. 1955, Uncl.

VCHERAKOVA

Impregnation of paper against burning. P. 89.

SO: East European Accessions List, Vol. 3, No. 9, Sept. 1954, Lib. of Congress

VONDRAKOVA, Milena, inz.; BABUREK, Jiri, inz.

Effect of mineralogical composition on the technological properties of paper coating kaolins. Papir a celulosa 19 no.2:45-48 F'64.

1. Vyzkumny ustav papiru a celulosy, pracoviste Praha (for Vondrakova). 2. Ustav keramiky a keramickych surovin, Karlovy Vary (for Baburek).

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Preparation of a cellulose fiber replica for electron microscopes.
Sber cel pap 8:53-69 '63.

VONDRAKOVA, M., ins.

"Techniques for electron microscopy" by D.Kay. Reviewed by M.Vondrakova. Papir a celulosa 18 no.1:24 Ja '63.

S/081/63/000/001/048/061
B144/B186

AUTHORS: Tyroler, Jiři, Formánek, Zdeněk, Vondráková, Zdena, Zahradník, Lubomír, Štovík, Miroslav

TITLE: Production of pure germanium dioxide from germanium concentrates

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1963, 347, abstract 1L38 (Czechosl. patent 101148, October 15, 1961)

TEXT: Ge concentrates are distilled continuously with concentrated HCl (ratio 1 : 1 - 2) with simultaneous bubbling of Cl_2 (gas) through the solution or addition of oxidants ($K_2Cr_2O_7 + H_2SO_4$). The $GeCl_4$ vapors together with HCl, vapors Cl_2 and impurities are washed out of the gas mixture by organic solvents (CCl_4); then, the $GeCl_4$ dissolved in the organic solvent is washed with HCl (acid) and hydrolized. Example. The apparatus comprises 2 containers with agitators of 70 l capacity (the mixture is tapped from one container, while at the same time the other

Card 1/2

tank is filled), a metering pump, a cooking boiler, a foam separator and an absorber. In the containers, the mixture of 25-30 kg concentrate and 50 kg HCl (acid) is prepared. The absorber is filled with CCl_4. The operation of the metering pump and the heating of the boiler is controlled in such a way that the foam entering the separator has a temperature of 100°C. From the separator the suspension is drained-off to waste, but the vapors are led into the absorber, from which $GeCl_4$ dissolved in CCl_4 is drawn off intermittently or continuously and hydrolized thrice with distilled water. The product contains 0.005 - 2% As and is a suitable raw material for semiconductors. [Abstracter's note: Complete translation.]

Card 2/2

VONDRASEF, Bohumil

SURNAME, Given Names

(3)

Country: Czechoslovakia

Academic Degrees:

Affiliation: Chair of Nutrition and Veterinary Dietetics, Veterinary College (Katedra Vyzivy a dietetiky veterinarny fakulty VSZ) Brno /Chief Jaroslav KABRT/

Source: Prague, Sbornik CSAZV Veterinarni Medicina, Vol 6(34), No 8, Aug 61; pp 631-638

Data: "Study of Volatile Nitrogenous Bases on Wheat Feeds"

VESELY, Zdenek; DVM
JELINKOVA, Vera; graduate veterinarian
VONDRASEK, Bohumil; graduate veterinarian

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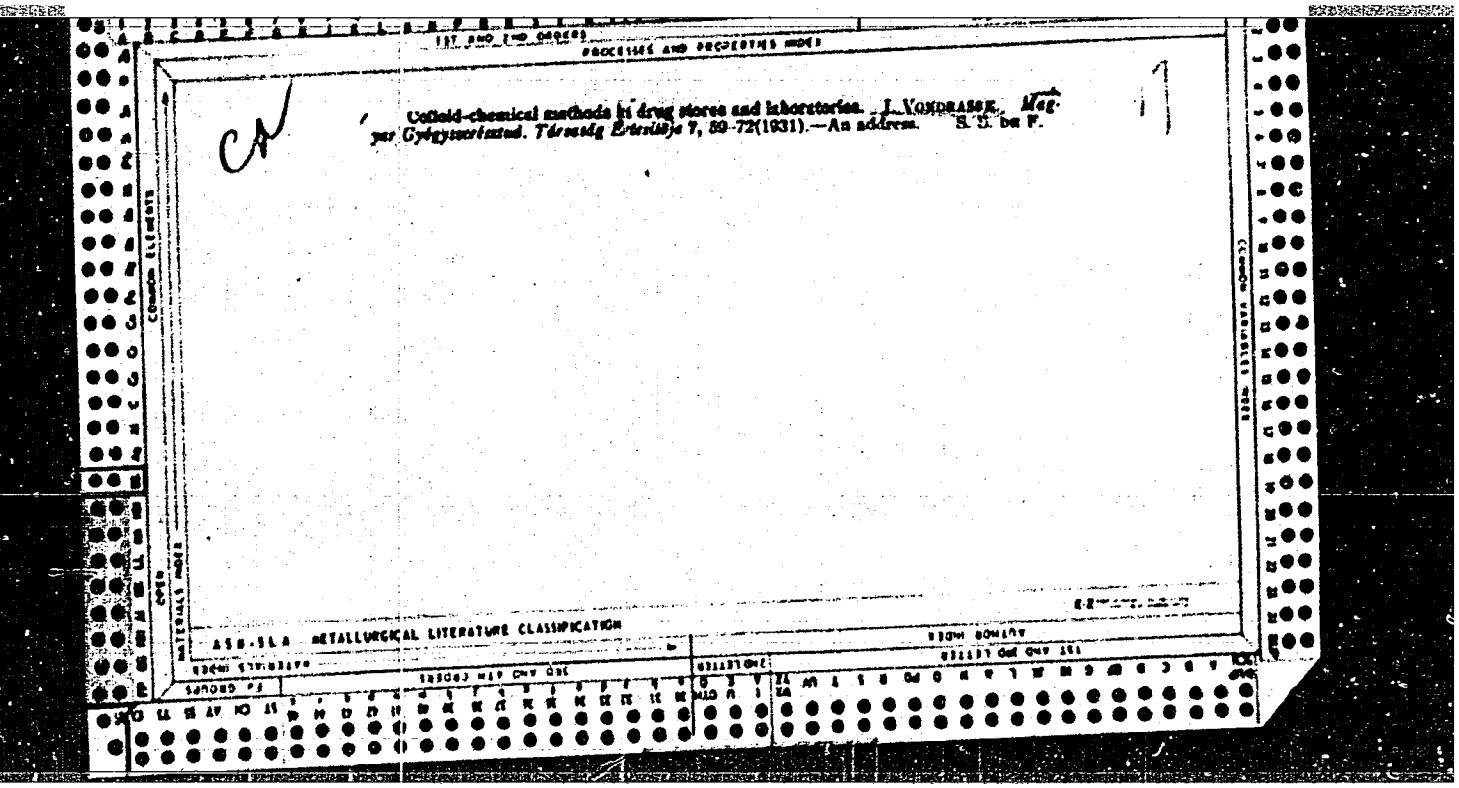


Colloid-chemical methods in drug stores and laboratories. J. VONDRASEK. *Magyar Gyógyszerészet. Történ. Értesítője* 7, 69–72(1931).—An address. S. V. bn P.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

VONDRÁSEK, J.

Anchoring of subsequently strained prestressed-concrete elements in Czechoslovakia. p. 479.

POZEMNI STAVBY. (Ministerstvo stavebnictvi) Praha, Czechoslovakia, Vol. (1) no. 9, (September) 1959.

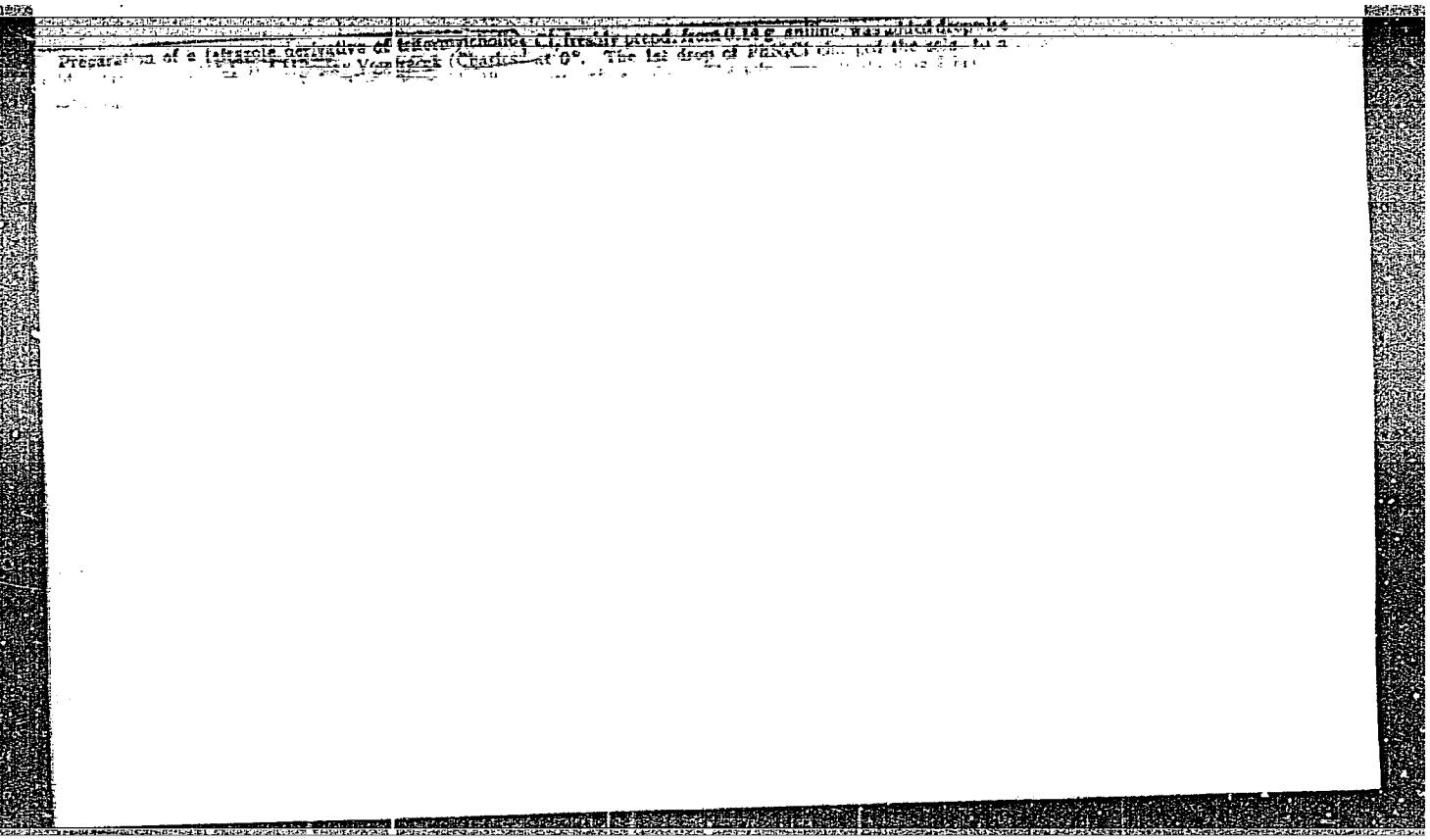
Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 11, November 1959.

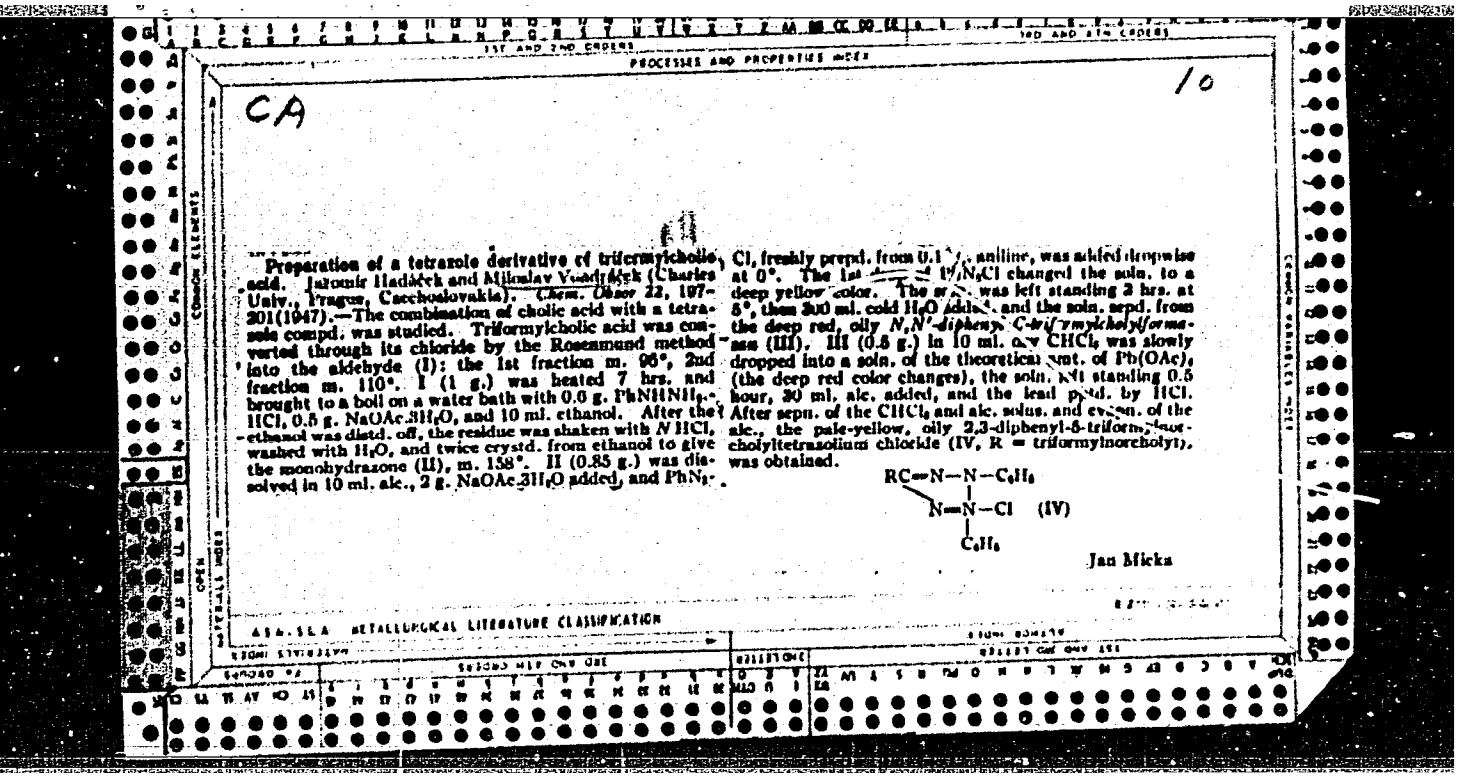
uncl.

VONDRASEK, J.

The handling of lumber from the point of view of the lumber technology. p. 201.
(SBORNIK RADA LESNICTVI. Praha) (Vol. 30, no. 3, Mar. 1957)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.





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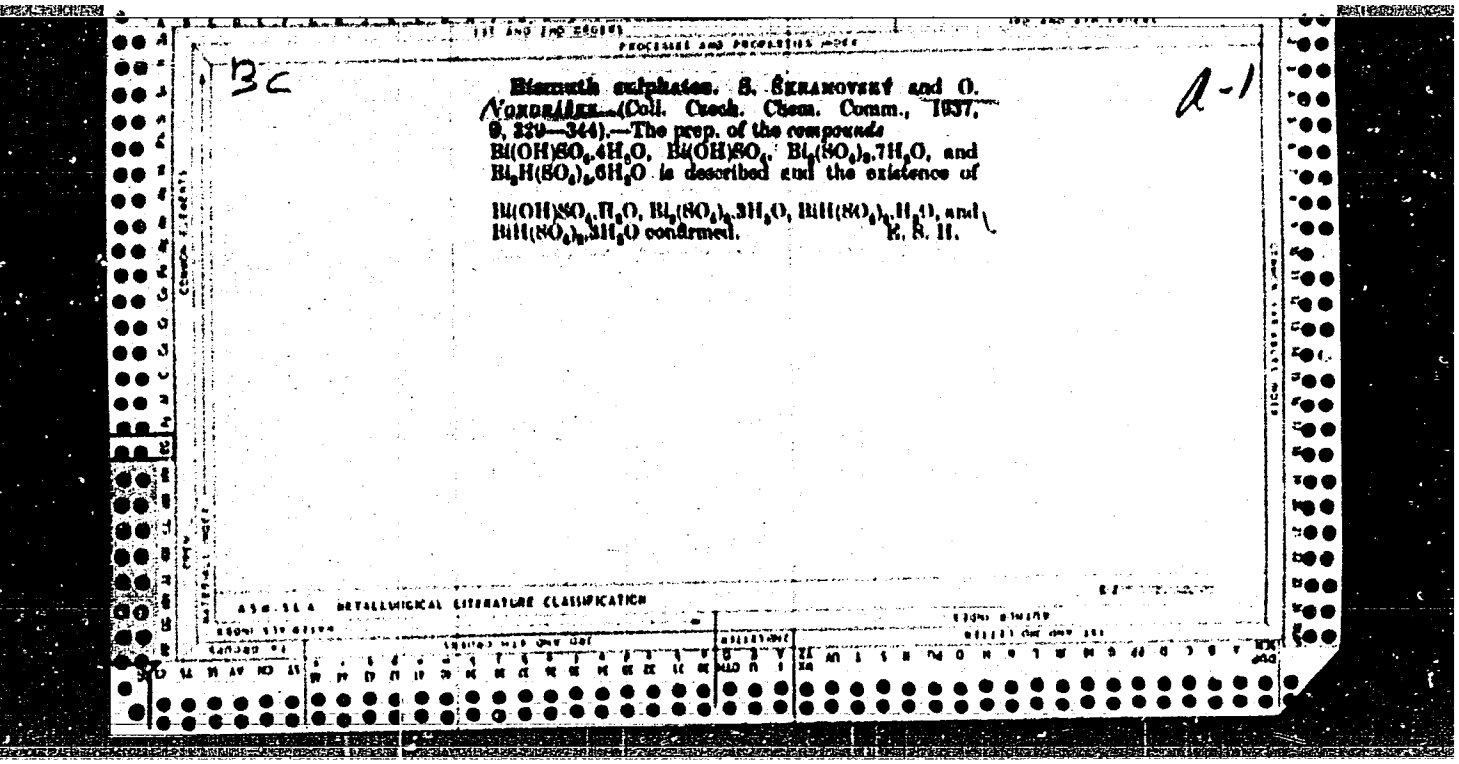
10

Preparation of a tetrazole derivative of triformylcholic acid. Jaromír Hladíček and Miloslav Vondrášek (Charles Univ., Prague, Czechoslovakia). *Chem. Obzor* 22, 197-201(1947).—The combination of cholic acid with a tetrazole compd. was studied. Triformylcholic acid was converted through its chloride by the Rosenmund method into the aldehyde (I); the 1st fraction m. 96°, 2nd fraction m. 110°. I (1 g.) was heated 7 hrs. and brought to a boil on a water bath with 0.6 g. $PhNHNH_2$·HCl, 0.5 g. $NaOAc.3H_2O$, and 10 ml. ethanol. After the ethanol was distd. off, the residue was shaken with *N* HCl, washed with H_2O, and twice crystd. from ethanol to give the monohydrazone (II), m. 158°. II (0.85 g.) was dissolved in 10 ml. alc., 2 g. $NaOAc.3H_2O$ added, and PhN_2Cl, freshly prepd. from 0.1 [illegible] aniline, was added dropwise at 0°. The 1st [illegible] PhN_2Cl changed the soln. to a deep yellow color. The [illegible] was left standing 2 hrs. at 5°, then 300 ml. cold H_2O added, and the soln. sepd. from the deep red, oily *N,N'-diphenyl-C-triformylcholylformazan* (III). III (0.8 g.) in 10 ml. abs. $CHCl_3$ was slowly dropped into a soln. of the theoretical amt. of $Pb(OAc)_4$ (the deep red color changes), the soln. left standing 0.5 hour, 20 ml. alc. added, and the lead ppt'd. by HCl. After sepn. of the $CHCl_3$ and alc. solns. and evapn. of the alc., the pale-yellow, oily 2,3-diphenyl-5-triformylnorcholyltetrazolium chloride (IV, R = triformylnorcholyl), was obtained.

Jan Micka



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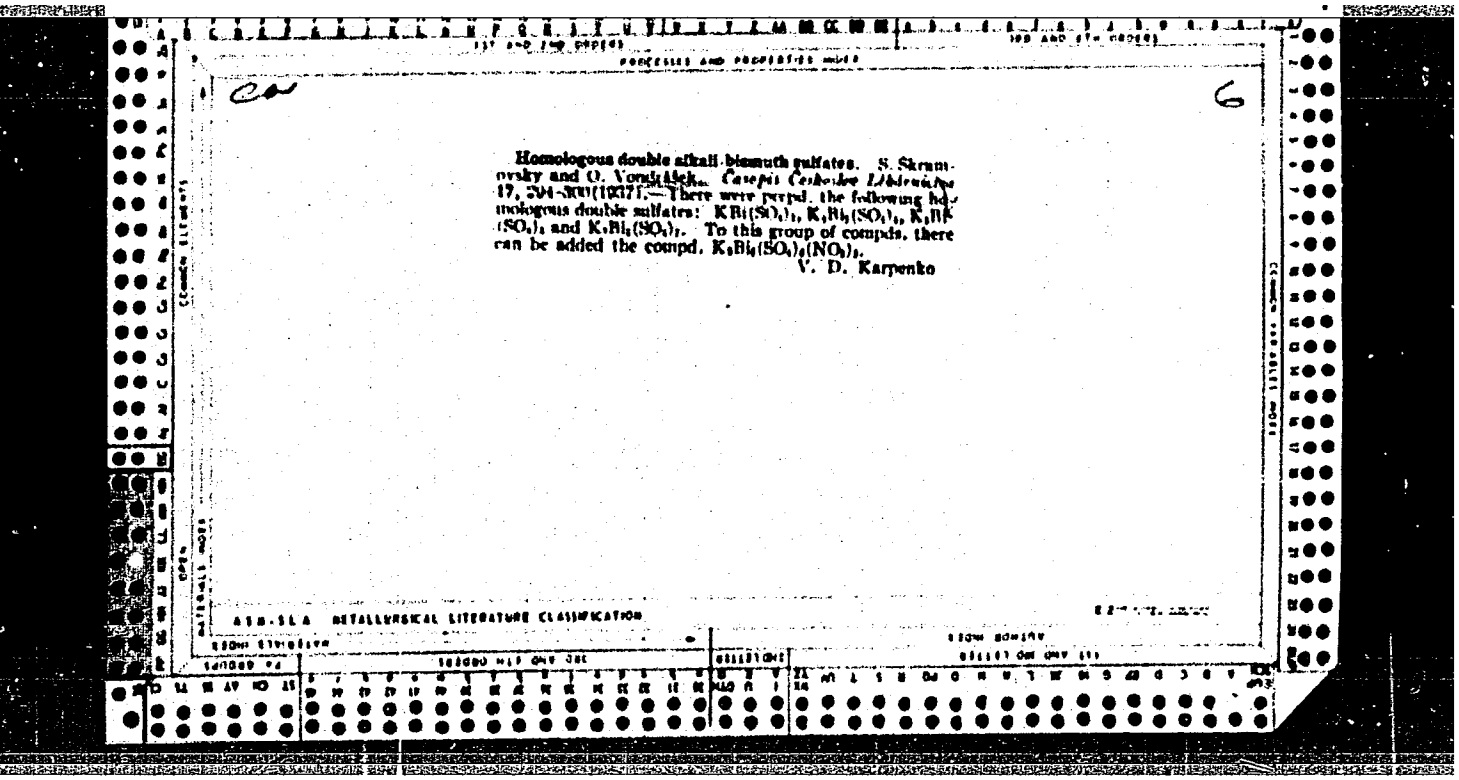
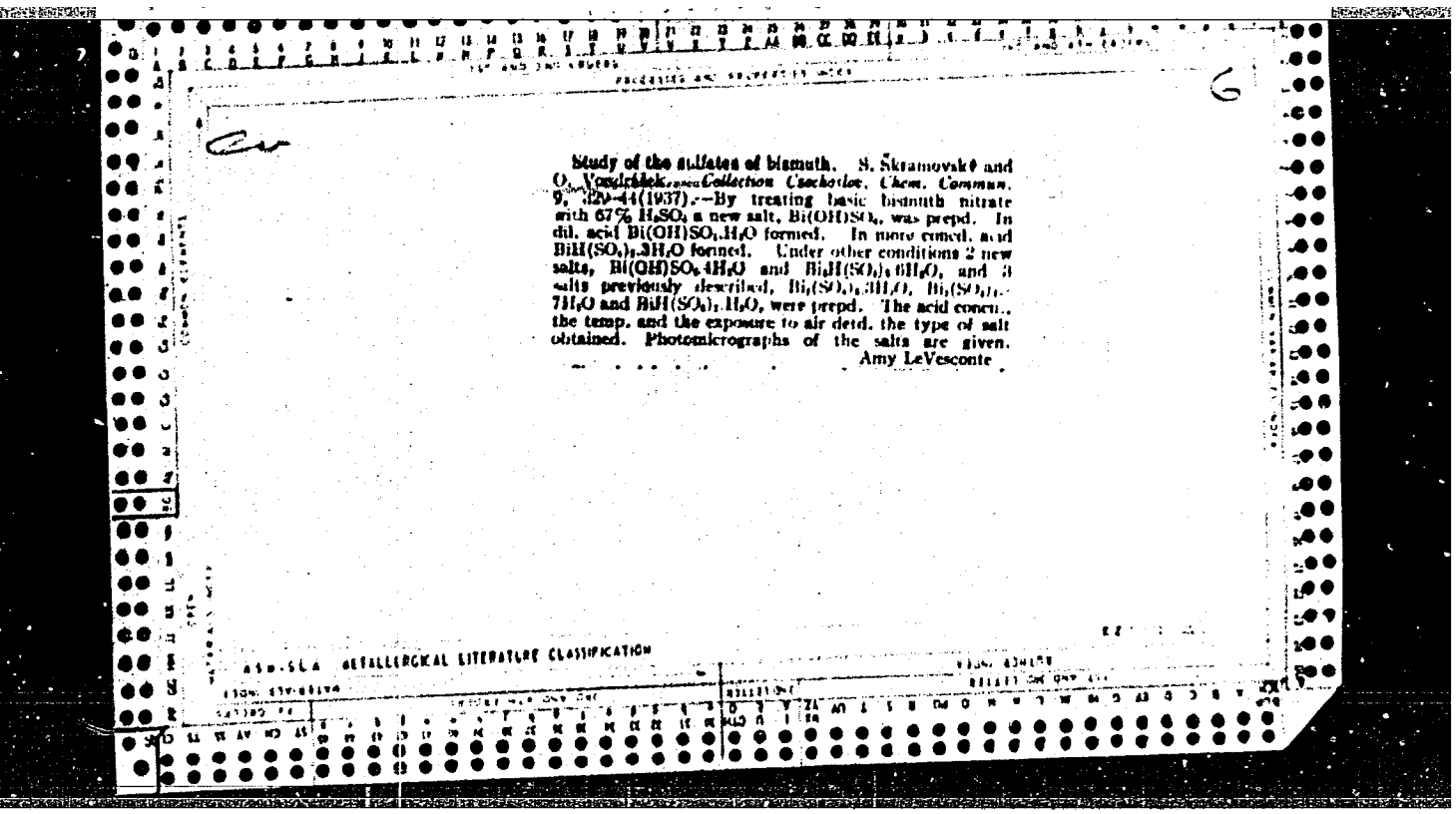
Bismuth sulphates. S. ŠKRAMOVSKÝ and O. NOVOTNÝ.—(Coll. Czech. Chem. Comm., 1937, 9, 329—344).—The prep. of the compounds $Bi(OH)SO_4.4H_2O$, $Bi(OH)SO_4$, $Bi_4(SO_4)_3.7H_2O$, and $Bi_8H(SO_4)_5.6H_2O$ is described and the existence of $Bi(OH)SO_4.H_2O$, $Bi_2(SO_4)_3.3H_2O$, $BiH(SO_4)_2.H_2O$, and $BiH(SO_4)_2.3H_2O$ confirmed. R. S. H.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION



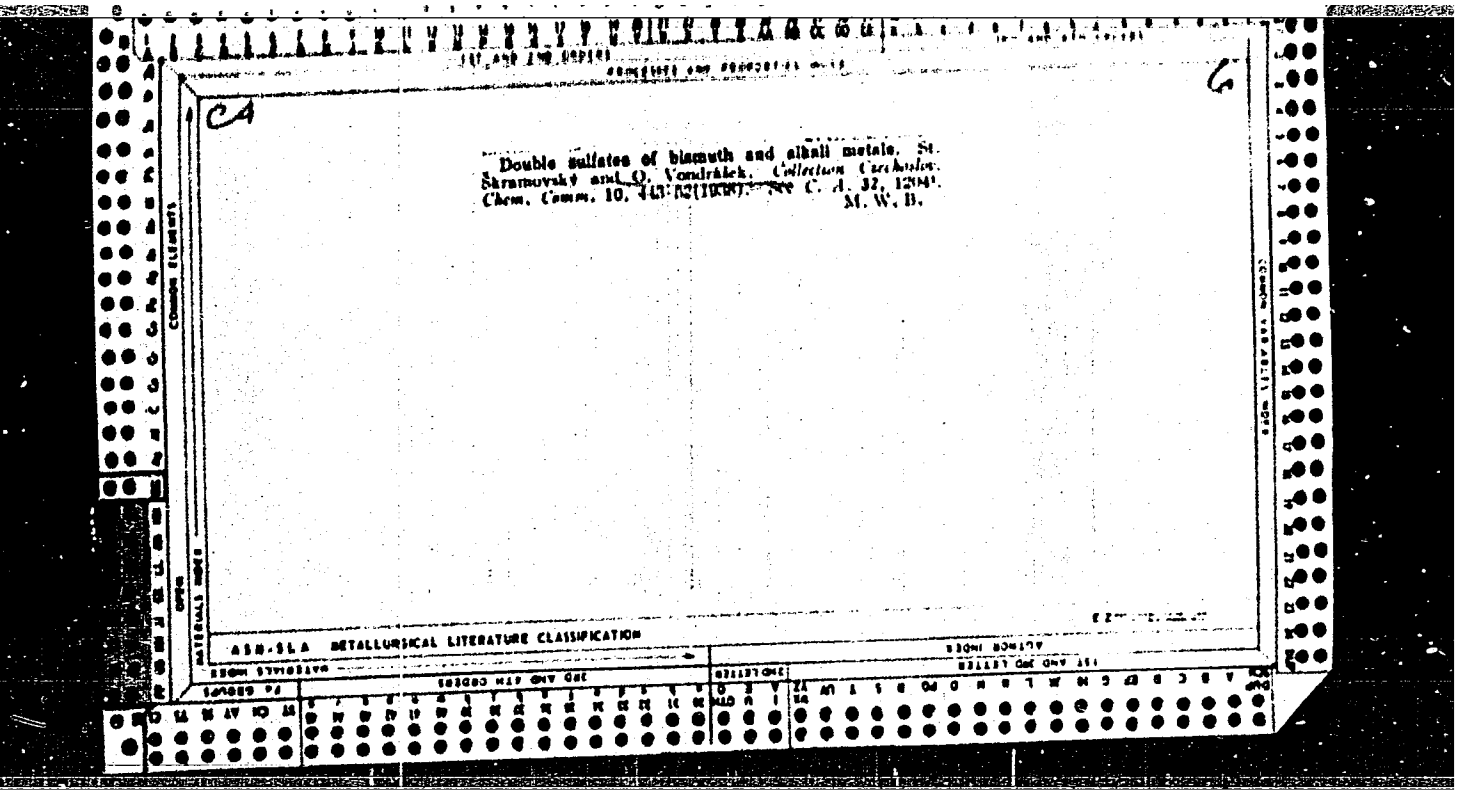
Homologous double alkali bismuth sulfates. S. Skramovsky and O. Vondáček. *Časopis Českého Lékárnictva* 17, 504-8(1937).—There were prepd. the following homologous double sulfates: $KBi(SO_4)_2$, $K_3Bi_5(SO_4)_{12}$, $K_3Bi(SO_4)_3$ and $K_5Bi_3(SO_4)_7$. To this group of compds. there can be added the compd. $K_3Bi_4(SO_4)_9(NO_3)_3$.

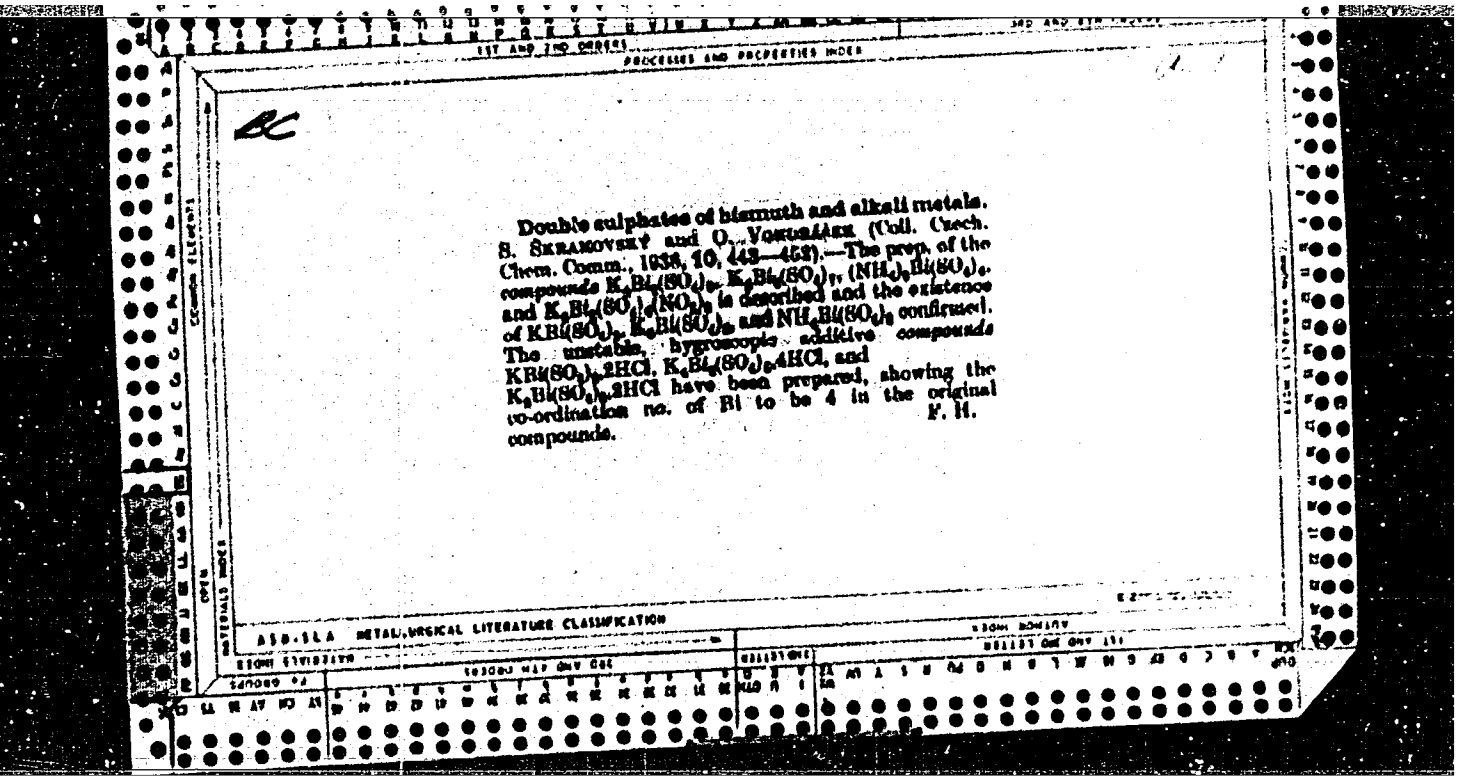
V. D. Karpenko



Study of the sulfates of bismuth. S. Škramovský and O. Vondráček. *Collection Czechoslov. Chem. Commun.* 9, 329-44 (1937).—By treating basic bismuth nitrate with 67% H_2SO_4 a new salt, $Bi(OH)SO_4$, was prepd. In dil. acid $Bi(OH)SO_4.H_2O$ formed. In more concd. acid $BiH(SO_4)_2.3H_2O$ formed. Under other conditions 2 new salts, $Bi(OH)SO_4.4H_2O$ and $Bi_2H(SO_4)_5.6H_2O$, and 3 salts previously described, $Bi_2(SO_4)_3.3H_2O$, $Bi_2(SO_4)_3.7H_2O$ and $BiH(SO_4)_2.H_2O$, were prepd. The acid concn., the temp. and the exposure to air detd. the type of salt obtained. Photomicrographs of the salts are given.

Amy LeVesconte





Double sulphates of bismuth and alkali metals. S. Škramovský and O. Vorešíšek (Coll. Czech. Chem. Comm., 1938, 10, 443—452).—The prep. of the compounds $K_3Bi_2(SO_4)_3$, $K_2Bi_4(SO_4)_7$, $(NH_4)_3Bi(SO_4)_3$, and $K_2Bi_4(SO_4)_6(NO_3)_2$ is described and the existence of $KBi(SO_4)_2$, $K_2Bi(SO_4)_3$, and $NH_4Bi(SO_4)_2$ confirmed. The unstable, hygroscopic additive compounds $KBi(SO_4)_2.2HCl$, $K_3Bi_2(SO_4)_3.4HCl$, and $K_2Bi(SO_4)_3.2HCl$ have been prepared, showing the co-ordination no. of Bi to be 4 in the original compounds. F. H.

COUNTRY : CZECHOSLOVAKIA H
CATEGORY : Chemical Technology. Chemical Products and Their Applications. Pharmaceuticals. Vitamins. Antibiotics
ABS. JOUR. : RZhKhim., No 10, 1959, No. 68815

AUTHOR : Vondrasek, O.
INSTITUTE : -
TITLE : Metacholiniumbromide

ORIG. PUB. : Ceskosl farmac., 1958, 7, No7, 418-420

ABSTRACT : An article dealing with pharmaceutical project that covers [$CH_3COOCH(CH_3)CH_2N(CH_3)_3$] Br. Comparison and discussion of literature data. The bibliography covers 13 titles. -- T. Zverova

Card: 1/1

VONDRASEK, V.

"Practical Problems of Electrolytic Polishing in Laboratories and Factories." p. 196
(Hutnik, Vol. 3, no. 9, Sept. 1953, Praha)

SO: Monthly List of East European Accessions, Vol. 3, no. 2, Library of Congress, Feb. 1954, Uncl.

VONDRASEK, Vaclav, doc. inz.; STANKA, Karel, inz.

Problems of thermal treatment of a thin steel strip from carbon steel with 1.2 per cent carbon. Sbor VSB Ostrava 9 no.3:335-345 '63.

VONDRASEK, V.

Journal of the Iron and Steel Institute
Vol. 176
Apr. 1954
Metallography

(1)

Electrolytic Polishing in the Laboratory and Works. V. Vondrášek. (*Hutník* (Prague), 1953, 2, (9), 196–198). [In Czech]. A critical survey of electrolytic polishing practice shows that: (a) Present-day methods are suitable for industrial use only in the case of aluminium, aluminium alloys, and stainless steel; (b) the greatest obstacle lies in the large amount of metal lost by solution at the anode; (c) surface quality is not always satisfactory; (d) methods are often difficult, and electrolytes are unstable; and (e) its main use at present is in metallography.—P. P.

VONDRASEK, J.

"The production of concrete pressure pipes prestressed lengthwise and crosswise."

p. 422 (Mechanizace) Vol. 4, no. 12, Dec. 1957
Prague, Czechoslovakia

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