CZECHOSLOVAKIA / Physical Chemistry. Surface Phenomena. Adsorption. Chromatography. Ion Exchange. B-13

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 22739.

Author : Marecol, Vladimir. Kopecky, Antonin.
Inst : Not given.
Title : Exchange Capacity of Aminoacids Adsorbed on Carrier.

Orig Pub: Chem. listy, 1958, 52, No 4, 743-744.

Abstract: The ion-exchange capacity of carboraffin (I) treated with saturated solution of tyrosine (II), was studied. It is shown that I-II absorbs Na^+ ions from NaOH solutions and Cl^- ions from HCl solutions, i. e., it acts as an amphoteric substance. II does not pass into the solution on this occasion. -- N. Fuks.

Card 1/1

Card 1/1

MARECEK, V.; [redacted] K.

TECHNOLOGY

periodicals: PRUMYSL POTRAVIN Vol. 9, no. 10, Oct. 1958

KOZICH, K; MARACEK, V. Volatile fatty acids in soup flavoring ingredients. p. 535.

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5
May 1959, Unclass.

MARECEK, V.; HERBRYCHOVA, A.

New trends in the technology of the artificial digestion of proteins. p. 496

PRUMYSL POTRAVIN. (Ministerstvo potravarskyho prumyslu) Praha, Czechoslovakia.
Vol. 9, no. 9, Sept. 1958

Monthly List of East European Accessions (EEAI), LV, Vol. 8, no. 7, July 1959
Uncl.

MARECEK, V.

TECHNOLOGY

periodicals: PRUMYSL POTRAVIN VOL. 9, no. 8, Aug. 1958

MARECEK, V.; HERBYCHOVA, A. Problems concerning the bonds of formaldehyde in the process of hardening the Custidin artificial sausage castings. p. 415

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5
May 1959, Unclass.

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their Applications. Fats and Oils. Waxes. Soaps and Detergents. Flotation Agents. H

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 21134

Author : Marecek, Vl.; Herbrychova, A.
Inst :
Title : Purification of Glycerin by Means of Ionites. II.

Orig Pub : Prumysl potravin, 1958, 9, No 6, 288-293

Abstract : No abstract. For Report I, see RZhKhim, 1959, 9877

Card : 1/1

MARECEK, V.

CZECHOSLOVAKIA / Chemical Technology. Chemical Products and Their Applications. Fats and Oils. Waxes. Soaps and Detergents. Flotation Agents. H-25

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 9877.

Author : Kopecky, A., Marecek, V.
Inst : Not given.
Title : Purification of Glycerine by Ion Exchange. I.

Orig Pub: Prumysl potravin, 1958, 9, No 4, 188-195.

Abstract: Current methods are described for purifying glycerine by ionites, particularly a method of purification based on ion exchange and applied in elimination of salts from glycerine solutions on an industrial scale. Bibl. 48 refs. Author's abstract.

Card 1/1

MARECEK, V. : KOZICH, K.

"Resolution of some albumins by means of strong acids." In Russian."

p. 132 (COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CHECKHOSLOVATSKIKH KHMICHESKIKH RABOT. -- Praha, Czechoslovaka.) Vol. 22, No. 1, Feb. 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

VLADIMIR MARECEK

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their Application, Part 3. - Food Industry. H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 72373.

Author : Vladimir Marecek, Karel Kozich, Anna Herbrychova.
Inst :
Title : Alimentary Keratin, Its Properties and Evaluation.

Orig Pub: Prumysl potravin, 1957, 8, No 9, 489-491.

Abstract: It is shown that at the acid hydrolysis, keratin splits easier and more completely than casein and flour gluten. Glutamic and aspartic acids, serine, glycine and cystine appear first in the hydrolizate, and amino acids of the leucine group, basic amine acids, valine, methionine and proline appear only later. It was found at a quantitative determination of amino acids in an keratin hydro-

Card : 1/2

129

MARECEK, V.

Determination of the fluidizing activity of malt anylases.

P. 196 (Kvasny Prumysl) Vol. 3, No. 9, Sept. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - VOL. 7, NO. 1, JAN. 1958

MARECEK, Vladimir

Sladove vytazky. (Malt Extracts. 1st ed. illus., bibl.) For the workers in the malt industry and the students of the technical schools and the Faculty of the Technology of Food. Prague, SNTL,1957. 112 p.

Most part of the book is devoted to the technology of manufacturing malt extracts for food and industrial purposes. The introduction contains information on the chemical aspects of production. Included are instructions on storage and control techniques.

Bibliograficky katalog, CSR, Ceske knihy, No. 32. 17 Sept 57. p. 681.

MAREČEK, VLADIMÍR

Hydrolysis of some proteins with strong acids. Vladimír Mareček and Karel Kočich (Výzkumný ústav pro oleje a tuky, Prague). *Chem. Listy* 50, 1174-9(1956).—The rate of transition of N of the primary NH_2 groups into soln. during the hydrolysis of some proteins with 10-20% HCl follows the course of a unimol. reaction. The first amino acids split off are glutamic and aspartic acids (others exceptionally); later on amino acids of the leucine group, valine, methionine, basic amino acids, and proline, are hydrolyzed off.

M. Hudlický

2

Mareček, V.

2

The hydrolytic cleavage of protein. IV. The formation and isolation of cystine by hydrolysis of keratin with hydrochloric acid. V. Mareček and A. Trubnyj (Výskumný Ústav Oleje a Tuky, Prague). *Chem. Zvesti*, 10, 130–4 (1956) (German summary); cf. *C.A.*, 42, 4216f; 49, 1125a.—Splitting off of cystine (I) and tyrosine by hydrolysis of keratin by HCl was studied quantitatively. It was found that the optimum amts. of I in soln. can be obtained by a short reaction time, up to 12 hrs., at 20% HCl and 110°. Lower temps. and longer reaction time are not favorable for I formation in the hydrolyzate. By chromatographic analysis under these conditions the amt. of I is quite high, but owing to a lower amt. of N in the primary amino groups and to higher amts. of decompn. products the conditions for the isolation of I are not favorable. A certain excess of HCl for the formation of I is desirable, but a concn. higher than 25% HCl causes the destruction of I. The isolated needles, were not the inactive form of I because S was not present, but chromatographic analysis shows tyrosine. Jan Micka

MARECEK, VLADIMIR

Splitting off ammonia during protein hydrolysis with hydrochloric acid and the determination of intensity of splitting. Vladimír Marček (Výzkumný ústav oleje a tuky, Prague). *Chem. Zvesti* 10, 63-9(1956)(German summary).—There is no direct relation between the amts. of aminodicarboxylic acids and the amt. of ammonia, which is contrary to findings of Osborne (O. and Harris, *J. Am. Chem. Soc.* 25, 323(1903); O *et al.*, *Am. J. Physiol.* 23, 180 (1908)). The approx. ratio of both values in animal prot. is 100:50 and in plant protein 100:100. In plant protein every free (not peptide-linked) carboxyl group of aminodicarboxylic acids is in the form of amide; in animal protein only one half of these groups are in that form. In splitting off ammonia by HCl the fastest reaction is the carryover of the total N into soln., followed immediately by ammoniacal N, and the slowest is the change of N into primary amino groups. After reaching the max. value of ammoniacal N, then the values of N in primary amino groups increases 3–4 times. On the basis of the findings a new formula for the intensity of splitting is given: [(amino N + ammoniacal N) × 100]/total N. Jan Micka

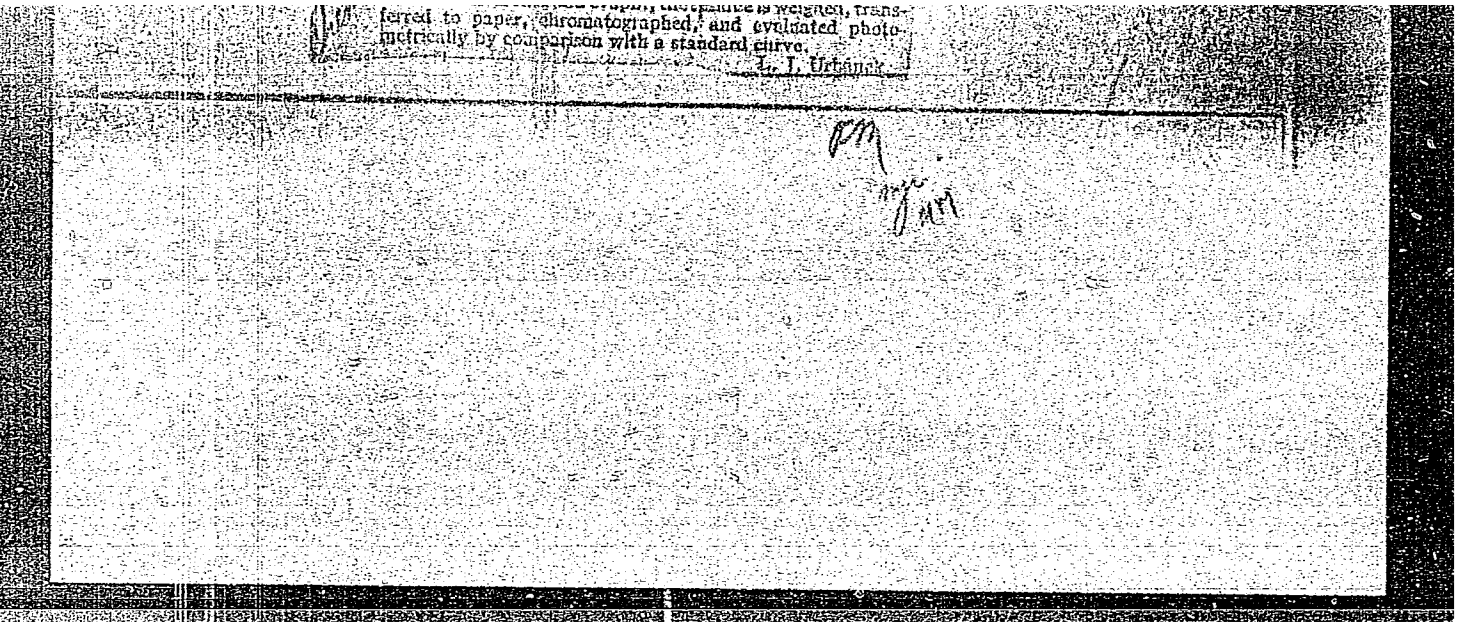
(1)

MARECEK, V.

MARECEK, V. Chromatographic and microbiologic determination of free amino acids produced through splitting proteins by means of hydrochloric acid. p. 520

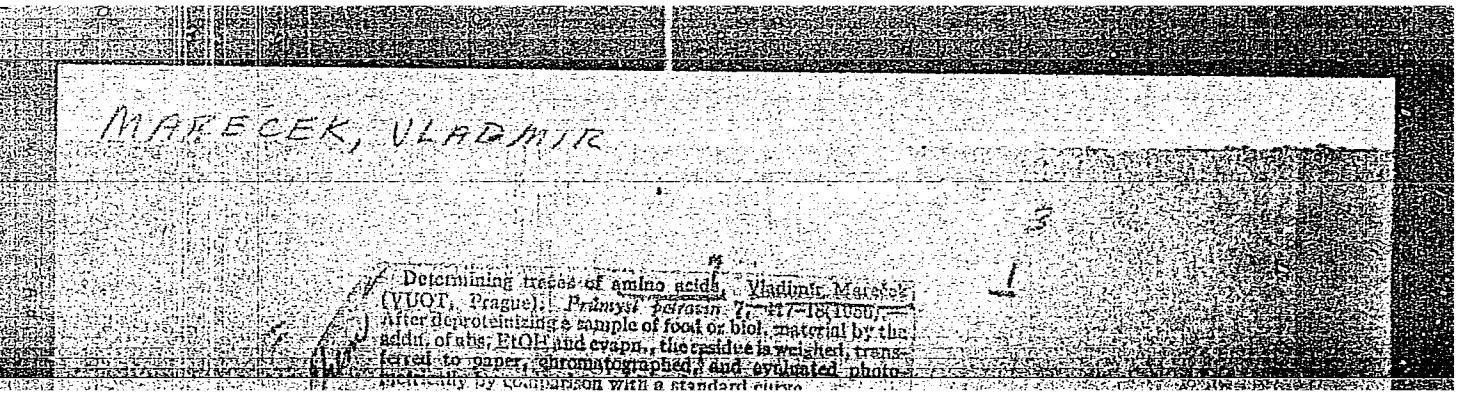
Vol. 7, no. 11, 1956
PRUMYSL POTRAVIN
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 2, 1957



ferred to paper, chromatographed, and evaluated photometrically by comparison with a standard curve.

L. I. Urbanyi



MAREČEK, VLADIMÍR

Determining traces of amino acids. Vladimír Mareček (VÚOT, Prague). *Průmysl potravin* 7, 417–18 (1956). After deproteinizing a sample of food or biol. material by the addn. of uric, EtOH and evapn., the residue is weighed, transferred to paper, chromatographed, and evaluated photo-

Czechoslovakia/Chemical Technology. Chemical Products and Their Application -- Fats and oils. Waxes. Soap. Detergents. Flotation reagents, I-25

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6412

Abstract: Then 5 ml of water are added into the separatory funnel and the extraction process is repeated. The aqueous extracts are combined, filtered and subjected to chromatography on Whatman No 1 paper, using as a solvent a mixture of n-butanol, CH_3COOH and water in the proportions of 4:1:5, and as developer a solution of $AgNO_3$ in acetone. The method has been adopted as a standard analytical method and is used for qualitative determination of milk in the above-stated fats.

Card 2/2

MARECEK, VLADIMIR

Czechoslovakia/Chemical Technology. Chemical Products and Their Application -- Fats and oils. Waxes. Soap. Detergents. Flotation reagents, I-25

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6412

Author: Zajic, Jiri; Marecek, Vladimir

Institution: None

Title: Determination of the Milk Content in Vegetable Fat Emulsified with Milk

Original Publication: Prumysl potravin, 1956, 7, No 1, 24-25

Abstract: Description of a chromatographic method for the determination of lactose and its cleavage products in margarine and other milk containing products. 10 g of the fat under study are heated in a beaker at 70°, transferred to a separatory funnel, the beaker is rinsed with petroleum ether (3 times, 10 ml each), 3 ml water are added, followed by 20 ml petroleum ether. Contents of the funnel are shaken, allowed to separate for 15 minutes after which the aqueous layer is drawn off.

Card 1/2

Mareček, Vlad.

The estimation of free amino acids in biological material. I. A new method for the estimation of glutamic acid in blood. Eva Amchová-Pražáková, Vlad. Mareček, Bedřich Chundela, and Karel Kácl (I. ústav pro chem. lékařskou, Prague). *Časopis Lékařů Českých* 94, 771–4(1955).—Deproteinize 5 ml. venous blood by 30 ml. EtOH acidified with 3 drops concd. HCl. Repeatedly wash the filter with a total vol. of 70 ml. acidified EtOH. Add 10 ml. water, NH_3 to pH 6.5–7.0, and charcoal to the filtrate and evap. *in vacuo* (2 mm. Hg) below 60°. Dissolve the weighed residue in 0.6 ml. 50% EtOH, filter through cotton and charcoal, and apply 0.03 ml. on paper. Repeat chromatography with BuOH-AcOH-water mixt. (4:1:5) 5 times. After ninhydrin detection (0.1% in BuOH, 60° for 20 min.) and treatment with $Cu(NO_3)_2$ soln., elute the glutamic acid (I) spot with 5 ml. abs. MeOH and read at 504 mμ. Construct a standard curve by using various amts. of I, standard of I run on the same paper sheet yields a correction. The mean error is ±5%. I level varies in the same individual. Preliminary results were in the range 2–3.8 mg. %.

I. M. Hais

CH

(3)

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their Application. Food Industry. H

Abs Jour: Ref Zhur-Khim., No 13, 1958, 45001.

Author : Marecek Vladimir.
Inst :
Title : Composition of Meat Juices and Extracts. II.

Orig Pub: Prumysl potravin, 1955, 6, No 3, 127-133.

Abstract: The amount of nitrogenous extractable substances which pass into the extract on treatment of the meat with water depends on the size of the chunks of meat and on the temperature of the water. At a low temperature the extraction proceeds more rapidly and includes the deeper layers of meat. Addition of lactic acid increases the intensity of extraction and hydrolysis of proteinous substances. Considered

Card : 1/2

MAREČEK, V.

780. **Reliable and rapid determination of amino acids in protein hydrolysates.** V. Mareček (Oils and Fats Res. Inst., Prague, Czechoslovakia). *Českosl. Farmac.*, 1955, 4, [7], 339–342.—The method based on chromatographic adsorption of hydrolysates is discussed. The chromatograms vary in intensity and size of the developed spots however carefully the conditions are controlled. This was found to be due to a number of factors, mainly the continual change in the composition of the hydrolysates. The nitrogen content of the soln. was determined and the chromatographic results were corrected to agree with it. Several hydrolyses have to be carried out under different conditions (excess of acid, temp. and reaction time) and the developed chromatograms are compared with standards. If the measurements are carried out spectrophotometrically an overall accuracy of ± 3 per cent. is obtained, whereas visual evaluation is correct to only ± 10 per cent. The quant. determination of individual amino acids is accurate to ± 15 per cent. Experimental details of the nitrogen determination (NH_3, primary amino, and total nitrogen), extent of hydrolysis, influence of reaction time and temp., and determination of individual amino acids are given.

A. O. JAKUBOVIC

MARECEK, Vladimir; HERBRYCHOVA, Anna

Process of enzymatic splitting of proteins. Sborn. pathofysiol. trav. vyz. 8 no.4:209-214 Dec 54.

1. Vyzkumny ustav pro oleje a tuky. Prednosta Ing. dr V.Jancik.
(PROTEINS,
digestion, enzymatic splitting)
(STOMACH, physiology,
protein digestion, enzymatic splitting)

MARECEK, V.

Composition of meat juices and extracts. V. Mareček and J. Němeček. *Průmysl Potravin* 5, 58-61(1954). The liquid phase of juice pressed out of hind beef at 70° contains 0.5–17.1% of the N present in the untreated meat, according to conditions. Amino N accounts for up to 20% of the total N. Besides higher fission products of proteins and complicated nitrogenous substances the meat juices contain amides and free amino acids: glutamic, asparaginic, glycine, alanine, serine, tyrosine, glutamine, asparagine, and the basic amino acids. The valine and leucine group is considerably less represented. The individual amino acids enter the soln. in the same succession as in the acid hydrolysis and not in the succession observed while digesting with pancreatic enzymes. Acid hydrolysis of meat and of meat juice yield amino acids of the same compn. Stewed meat (lacking water) contains larger amts. of amides of dicarboxylic amino acids. Under excess of water these are more or less sapond. L. J. Urbánek

MARECEK, V.

Hydrolysis and digestion of proteins. V. Mareček (VUOT, Prague, Czech.). *Prùmysl Potravin* 4, 197-9 (1953).—Review on different methods of acid and enzymic hydrolysis. L. J. Urbánek

MARECEK, V.

" Dried Meat," p. 36.
(Prumysl Potravin, Vol.4, No.1, Jan. 1953, Praha.)

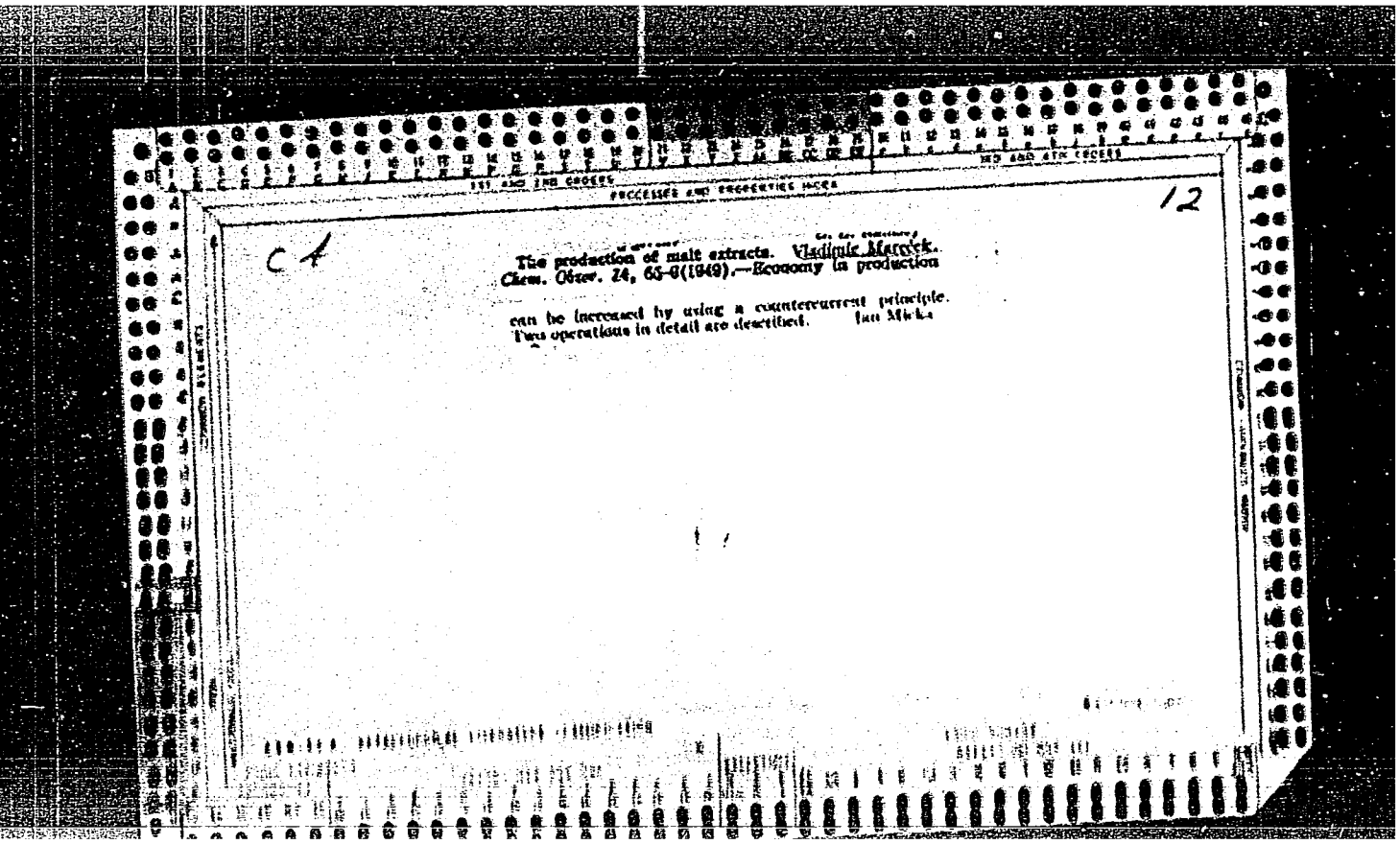
SO: Monthly List of East European Accessions, Vol.2, No.9, Library of Congress, September 1953, Uncl.

CA

10

A new method of preparation of salicylhydroxamic acid. P. Rotan and V. Mareček (Masaryk Univ., Brno, Czech.). *Chem. Listy* 45, 401(1951).—A mixt. of 2.1 g. Na_2CO_3, 1.4 g. $NH_2OH.HCl$, and 3 g. o-HOC_6H_4COCl in 3.5 ml. H_2O and 50 ml. Et_2O, left 90 min. at room temp. gave an almost quant. yield of *salicylhydroxamic acid*, m. 169°.

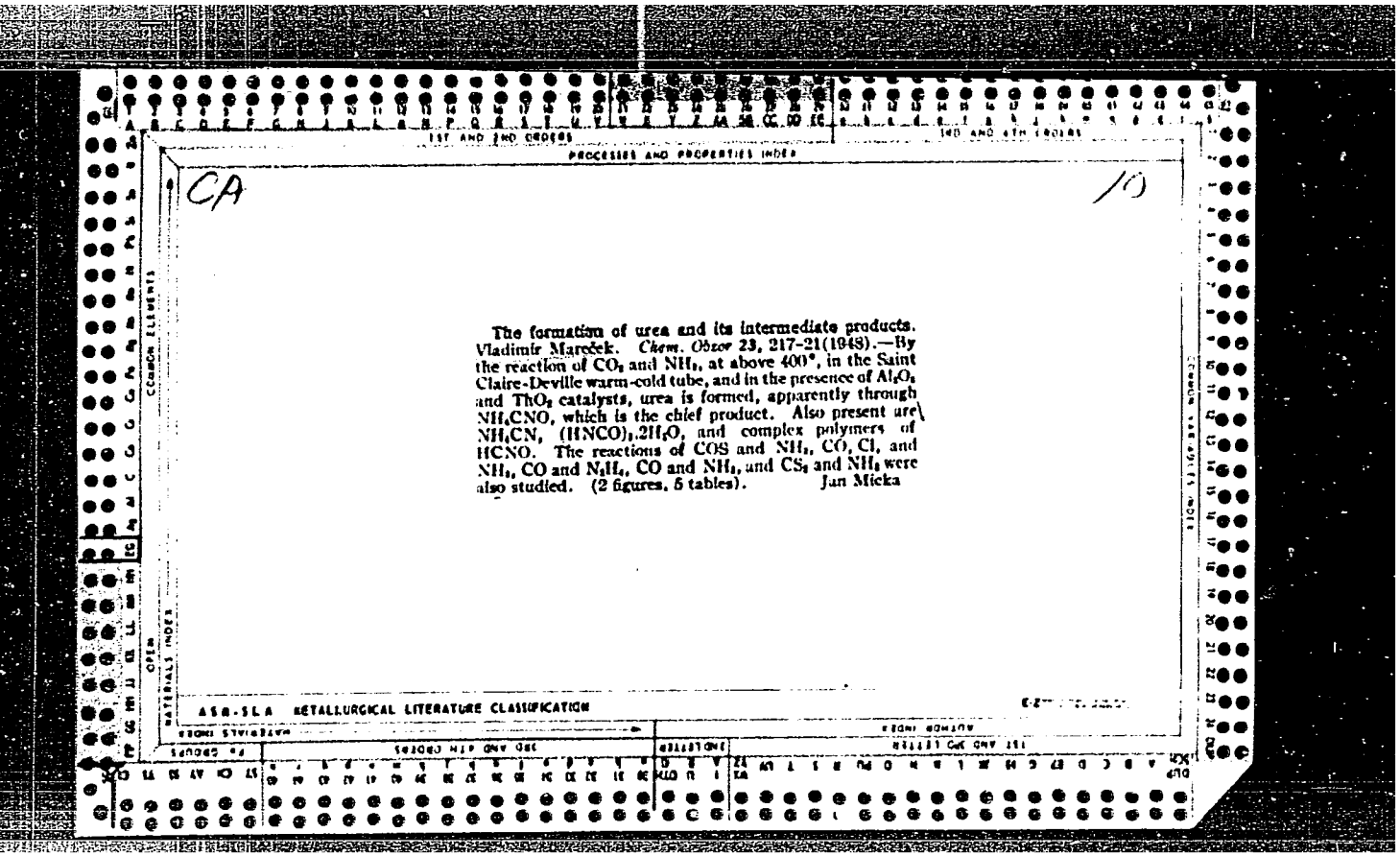
M. Hudlický



C4

12

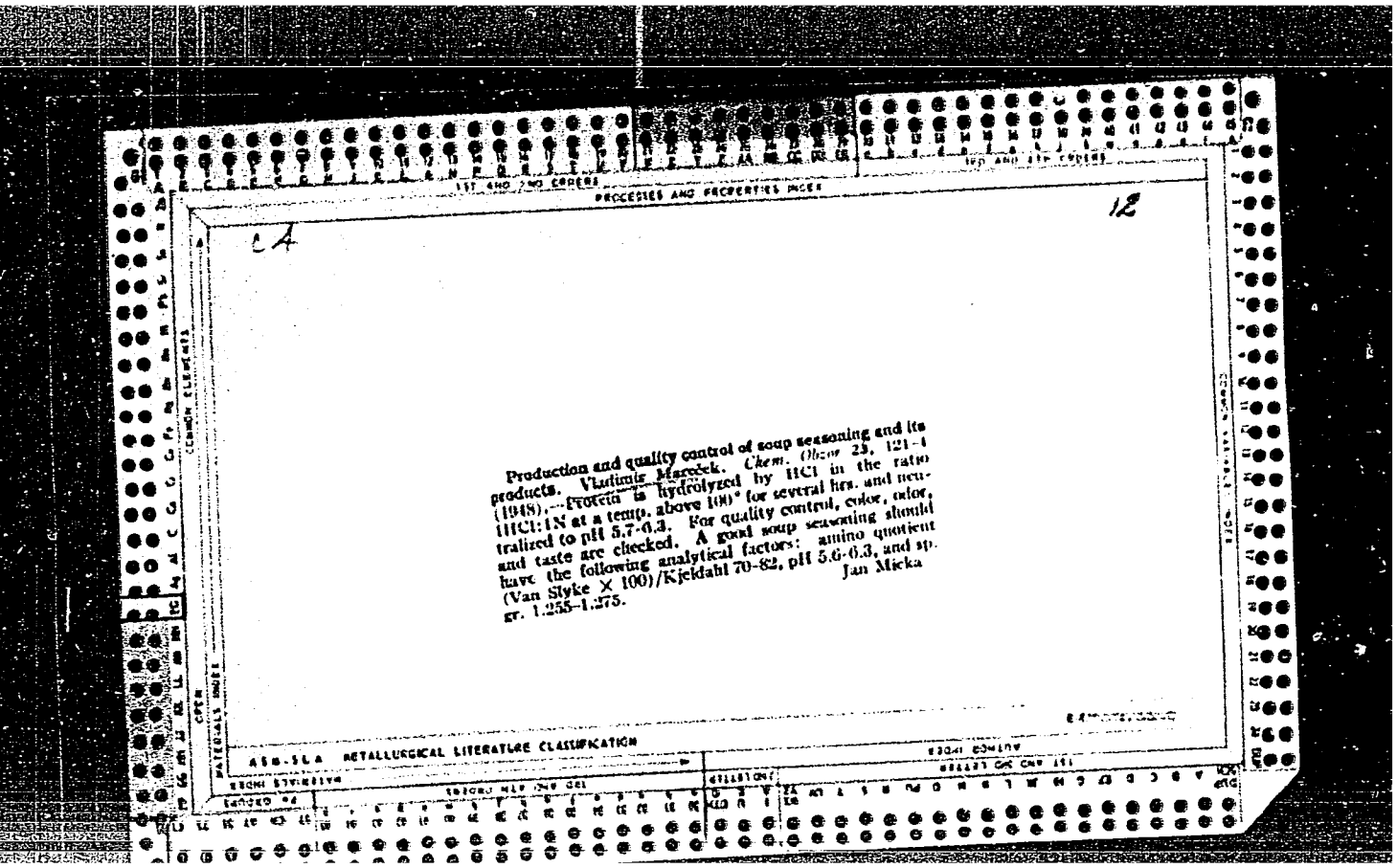
The production of malt extracts. Vladimír Marček. Chem. Obzor. 24, 65-9(1949).—Economy in production can be increased by using a countercurrent principle. Two operations in detail are described. Jan Micka



CA 10

The formation of urea and its intermediate products. Vladimír Mareček. *Chem. Obzor* 23, 217–21(1948).—By the reaction of CO_2 and NH_3, at above 400°, in the Saint Claire-Deville warm-cold tube, and in the presence of Al_2O_3 and ThO_2 catalysts, urea is formed, apparently through NH_4CNO, which is the chief product. Also present are NH_4CN, $(HNCO)_3.2H_2O$, and complex polymers of HCNO. The reactions of COS and NH_3, CO, Cl, and NH_3, CO and N_2H_4, CO and NH_3, and CS_2 and NH_3 were also studied. (2 figures, 5 tables). Jan Micka

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

12

A study on leaven and dough. II. Vladimír Mareček and Alexander Trubaty. *Chem. Obzor* **26**, 137 [illegible] cf. *ibid.* **21**, 130 (1946). The degree of acidity and the quantity of gas produced in the doughs made with rye flour depend on the degree of extn. of the flour. The expts. carried out on the sterilized flours proved that not the microorganisms but the reserve of the nutrients (depending again on the degree of extn. of flours) is decisive for the formation of acid and gas. Gas production is more dependent on the extn. of flours than the acidity.

Jan Micka

CA

10

Synthesis of benzoic acid from chlorobenzene, carbon monoxide and water. Vladimír Mazáček. *Chem. Obzor* 7, 171-3 (173 English) (1932).—BzCl is synthesized from PhCl, CO and H_2O in the presence of catalysts such as Cu_2Cl_2, active carbon, etc., under pressure and temp. above 300° conforming to the Nernst equation. Besides C_6H_6, HCl, CO_2, C and tarry products, BzOH is obtained in 3.0% yield. The best catalysts are Cu_2Cl_2 and active C. No Ph_2CO, ClC_6H_4COPh or Ph_2 was observed in the reaction products.

Jaroslav Kučera

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MARECEK, Vlastislav; URBANEK, Karel

Treatment of genua vara and genua valga in children by temporary partial epiphysiodesis by the Hlount method. Sborn.ved. prac.lek.fak.Karlov.Univ. (Hrad.Kral.) 6 no.5:525-531 '63.

1. Ortopedicka klinika; prednosta: prof.MUDr. J.Vavrda, LFKU v Hradzi Kralove.

EMR, Jaromir; MARECEK, Vitezslav

The importance of measuring the torsion of the spine for determination of the degree of scoliosis. Acta chir. orthop. trauma. cech. 29 no.3: 260-263 Je '62.

1. Ortopedicka klinika fakultni nemocnice v Hradci Kralove, prednosta prof. dr. J. Vavrda.

(SCOLIOSIS physiol)

MARECEK, V.

Mechanization and automatization of secondary functions; a book review. p.9.
Activity of the cultural center at Chelyabinsk. p.9
Soviet motion pictures about innovators. p.9. (Technicke Noviny, Praha, Vol. 2, no. 24, Dec. 1954)

SO: Monthly list of East European Accessions (EEAL) LC Vol 4, No. 6, June 1955, Uncl

L 20594-66 RO

ACC NR: AP6012037 SOURCE CODE: CZ/0060/65/000/002/0068/0069

AUTHOR: Klatil, F. (Lt. Colonel, Doctor of medicine); Marecek, P. (Graduate physician)

ORG: none

TITLE: Experience with the application of some psychomimetics and their possible use in military medicine

SOURCE: Vojenske zdravotnicke listy, no. 2, 1965, 68-69

TOPIC TAGS: military medicine, nervous system drug, pharmacology, psychic stimulation

ABSTRACT: The most popular psychomimetics are Phenmetrazine and Ritalin (Centendrin). Their toxicity is very low. These drugs are used to strengthen dynamic activity and the psychic efficiency. They suppress the feeling of hunger, and have a generally stimulating effect, mainly in tired people. They should not be used in patients suffering from liver ailments. Ritalin removes the feeling of tiredness and sleepiness. In peace time Ritalin is used in hospitals in syndromes of apathy, hyposthenia and neurasthenia. With out-patients the use should be strictly controlled because these drugs are habit-forming. During war conditions, it could be administered to increase psychic activity and tolerance of hunger and cold. It should then be administered to drivers, radar equipment operators, and to personnel in communication centers. [JPRS]

SUB CODE: 06 / SUBM DATE: none UDC: 356.33:613.867-085.78-035.1-085.511

Card 1/1 jk

MARECEK, O.

Certain aspects in dermatologic practice in the ambulatorium ONP in Sumperk. Cesk. derm. 26 no.3:137-140 Mar 51. (CIML 20:8)

MARECEK, Karel

Some problems of mechanization and automation in the Czechoslovak building industry. Inz stavby 10 no.1:suppl.1-3 Ja '62.

1. Ministerstvo vystavby, Praha.

CZECHOSLOVAKIA

MAREK, J.

Prague, Casopis pro mineralogii a geologii, No 3, 1964, p 365

"Sixtieth Anniversary of Prof. Bedrich Boucek."

ZIKMUND, V.; BURIAN, V.; ZIKMUNDOVA, V.; MARSEEK, J.; HASEK, V.

Extended epidemic of salmonellosis caused by Salmonella typhi murium in a regional town. Cesk. epidem. mikrob. imun. 8 no.4: 267-272 July 59

1. Krajska hyg. stanice v Liberci.--Mestska hyg. epid. stanice v Liberci -- Infekcni odd. KUNZ v Liberci.
(SALMONELLA INFECTIONS, epidemiol.)

MARECEK, J. ; MULLER, J.

Construction of the railroad motor car M 262 from the point of view of maintenance. p. 54.

ZELEZNICNI DOPRAVA A TECHNIKA. (Ministerstvo dopravy) Praha, Czechoslovakia. Vol. 7, no. 2, 1959.

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

Uncl.

MARECEK, J. ; MULLER, J.

Construction of a M 131.1 rail-motor car from the point of view of maintenance. p. 8.

ZELEZNICNI DOPRAVA A TECHNIKA. (Ministerstvo dopravy) Praha, Czechoslovakia. Vol. 7, no. 1, 1959.

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

Uncl.

MARECEK, J.

Do we simply copy old rules?

p. 261 (Zeleznicar. Vol. 5, nos. 1-6, 8; Jan.-June, Aug. 1955. No. 10, Oct. 1957. Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

MARECEK, Jiri, inz.

Relation of the vegetation along roads to the landscape planning. Rost vyrova 11 no.1:77-92 Ja '65.

1. Chair of Gardening of the Higher School of Agriculture, Prague 6, Technicka 3. Submitted September 11, 1964.

MARECEK, F.

"Increasing the production of forced vegetables."

P. 42. (Vestnik. --Praha, Czechoslovaka.) Vol. 5, no. 1, 1958.

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

MARECEK, F

CZECHOSLOVAKIA/Cultivated Plants - Potatoes, Vegetables, Melons. M-3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10827

Author : Marecek, F.
Inst :
Title : Growing the "Stupicky obrovsky" [Stupitskaya ogromnaya] Cauliflower Variety.

Orig Pub : Ovocnar. a zelinar., 1957, 5, No 6, 182-183

Abstract : No abstract.

Card 1/1

23

MARECEK, F.

An international conference on fruit culture, viticulture, and horticulture.

p. 519 (Vestnik) Vol 4, no 10 1957. Praha, Czechoslovakia.

SO: Monthly Index of East European Accessions (EEAI) LC, Vol 7 no 1 Jan 1958

J

Country : CZECHOSLOVAKIA
Category: Soil Science. Mineral Fertilizers.

Abs Jour: RZhBiol., No 18, 1958, No 82108

Author : Marecek, Frant.
Inst : -
Title : An Expedient Time to Begin Using Hydoponics.

Orig Pub: Ovocnar. a zelinar., 1956, 4, No 8, 245-247

Abstract: Experiments made in the German Democratic Republic are described. Cucumbers were cultivated in water cultures in 100 liter solutions, and there were added; KNO_3 - 100 g, $CaHPO_4$ - 73.2 g, $MgSO_4$ - 12 g, $FeSO_4$ - 1.4 g, $ZnSO_4$ - 0.08 g, $CuSO_4$ - 0.06 g, and borax - 0.17 g. The nutrient solution was poured into wooden troughs lined with a plastic, the

Card : 1/2

J

Country : CZECHOSLOVAKIA
Category: Soil Science. Mineral Fertilizers.

Abs Jour: RZhBiol., No 18, 1958, No 82108

plants were set out in peat moss, moistened with the nutrient solution, and packed with a 10 cm layer on a wooden framework of 7 cm boards with a space of 4 cm between. A 5 cm space remained between the framework and the solution. Sand cultures were employed with still greater success. The sand with grains of 3-4 mm was filled in to a layer of 20 cm The solution was poured into the sand 3-4 times during twenty-four hours, for 1 hour each time. -- Z. I. Zhurbitskiy

Card : 2/2

MARECEK, F.

The first national conference of employees of the State Highway Administration. p. 143. SILNICE. (Ministerstvo Dopravy)) Praha. Vol. 4, no. 6, June 1955.

SOURCE: East European Accessions List, (EEAL), Library of Congress Vol. 5, no. 12, December 1956.

KOSTAK, J., inz.; KRCAL, Z.; MARECEK, E.

Apparatus for measuring dynamic characteristics of the selenium rectifying valves. Elektrotechnik 17 no.12:348-350 D '62.

1. Elektropristroj Modrany, n.p., Vyzkim usmernovacu, Bechovice.

SKLADAL,J.; KOCI,B.; MARECEK,B.; VALACH,A.

New elements in the functional examination of respiration.
Cas.lek.cesk. 103 no.12:314-316 20 Mr'64

1. Ustav klinicke fyziologie a ustav patologicke fyziologie lekarske fakulty hygienicke KU v Praze; prednosta: prof.dr. J.Skladal.

PARHON,C.I.,acad.; CRACIUN,E.,prof.; ASLAN,Ana,prof.; MAREA,Viorica; VELCIU,V.; DAVID,I.; ZAHARIA,Maria; CONSTANTINESCU,Smaranda; TASCA,C.; POPOVICI,M.

Tissular changes and lesions related to the pathology of the aged. Rumanian M. Rev. 3 no.3:3-11 Jl-S '59.
(GERIATRICS, pathology)

SVADZHYAN, P.K.; VISHNYAKOVA, V.N.; MARDZHANYAN, K.S.

Copeognatha of the Armenian S.S.R. and methods of their laboratory maintenance. Izv. AN Arm. SSR. Biol. nauki 16 no.9:89-94 S'63 (MIRA 17:7)

1. Zoologicheskiy institut AN Armyanskoy SSR.

MARDZHANYAN, G.M.; ASATRYAN, E.V.; MARKOSYAN, A.A.; UST'YAN, A.K.; AVRAMENKO, I.D., kand. biolog. nauk (Gomel'); MISKO, L.A.; AGAFONOVA, Z.Ya., kand. biolog. nauk; ABBASOV, Ya.M., mladshiy nauchnyy sotrudnik; SADYKHOV, D.M., aspirant

Brief information. Zashch. rast. ot vred. i bol. 8 no.10: 55-57 O '63. (MIRA 17:6)

1. Armyanskiy institut zemledeliya (for Mardzhanyan, Asatryan, Markosyan, Ust'yan). 2. Poltavskiy sel'skokhozyaystvennyy institut (for Misko). 3. Kurskaya sel'skokhozyaystvennaya opytnaya stantsiya (for Agafonova). 4. Azerbaydzhanskiy nauchno-issledovatel'skiy institut khlopkovodstva, Kirovabad (for Abbasov). 5. Vsesoyuznyy institut zashchity rasteniy (for Sadykhov).

MARDZHANYAN, G.M.; MARKOSYAN, Zh.K.

Chemical control of mulberry pests and the protection of silkworms from poisoning. Izv. AN Arm. SSR Biol. nauki 15 no.5:11-22 My '62. (MIRA 17:6)

L 23773-66 EWT(1)/T JK/RO
ACC NR: AP6015272 SOURCE CODE: UR/0298/65/018/008/0010/0021

AUTHOR: Mardzhanyan, G. M.; Kankanyan, A. G.; Ust'yan, A. K. 32 B

ORG: Armenian Institute of Plant Protection (Armyanskiy institut zashchity rasteniy)

TITLE: Causes of mass reproduction of phytophagous ticks when plants are treated with organic chlorine insecticides

SOURCE: AN ArmSSR. Izvestiya. Seriya biologicheskikh nauk, v. 18, no. 8, 1965, 10-21

TOPIC TAGS: insecticide, animal reproduction, entomology, plant physiology

ABSTRACT: After a discussion of the literature in which opinion is divided on the causes for large-scale tick and mite reproduction after treatment of plants with DDT and similar insecticides the author presents the results of 10 years' research on this question. In a first series of experiments the tick population on a plant treated with DDT exceeded the control after 10-20 days, thus supporting the author's hypothesis that DDT actually improves feeding conditions for ticks and mites through changes it causes within the cotton plant itself. A second series of experiments revealed essential changes in the metabolism and chemical content of cotton leaves as a result of the effect of DDT on plant physiology. The author concludes that this factor should be added to the complex factors involved in this phenomenon. Other possible factors are the greater sensitivity of predators to DDT and the hypothesis that the fertility of ticks and mites is enhanced indirectly by DDT. Orig. art. has: 2 figures and 2 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 23Feb65 / ORIG REF: 008 / OTH REF: 013

Card 1/1 RB

MARDZHANYAN, G.M.; UST'YAN, A.K.

Use of integrated control methods against the plant louse Myzodes persicae Sulz. (Homoptera, Aphididae) on the tobacco plant. Ent. oboz. 44 no. 4:750-761 '65 (MIRA 19:1)

1. Armyanskiy nauchno-issledovatel'skiy institut zashchity rasteniy Ministerstva sel'skogo khozyaystva Armyanskoy SSR, Yerevan.

MARDZHANYAN, G.M.; KANKANYAN, A.G.; UST'YAN, A.K.

Causes for the mass reproduction of plant feeding mites following plant treatment with chloro-organic insecticides. Izv. AN Arm. SSR. Biol. nauki 18 no.8:10-21 Ag '65. (MIRA 18:9)

1. Armyanskiy institut zashchity rasteniy.

MARKOSYAN, A.A.; MARDZHANYAN, G.M., kand. biolog. nauk; KARYAN, A.A., aspirant; SHARAFUTDINOV, Sh.A.; RASULOV, F.K.; SVANIDZE, N.V., starshiy nauchnyy sotrudnik ; RABINOVICH, I.M., starshiy nauchnyy sotrudnik; DERYABIN, V.I.; SULEYMANOV, I., mladshiy nauchnyy sotrudnik; SHEVTSOV, S.I., starshiy nauchnyy sotrudnik (TSelinnyy kray)

From the practices in the use of poisonous chemicals. Zashch. rast. ot vred. i bol. 9 no.9:21-23 '64. (MIRA 17:11)

1. Armyanskiy institut zemledeliya (for Markosyan, Mardzhanyan, Karyan). 2. Sredneaziatskiy institut zashchity rasteniy (for Sharafutdinov, Rasulov). 3. Zakavkazskaya opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta lekarstvennykh i aromaticheskikh rasteniy (for Svanidze, Rabinovich). 4. Zaveduyushchiy otdelom zashchity rasteniy Samarkandskoy opytnoy stantsii (for Deryabin). 5. Samarkandskaya opytnaya stantsiya (for Suleymanov).

MARDZHANYAN, G.M.; UST'YAN, A.K.; KANKANYAN, A.G.

Methods for increasing the efficiency of chemical control of plant lice on tobacco. Izv. AN Arm. SSR. Biol. nauki 16 no.10: 57-67 0'63 (MIRA 16:12)

1. Otdel zashchity rasteniy Instituta zemledeliya Armyanskoy SSR.

USSR / General and Specialized Zoology - Insects. P

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 20884

the time that mass egg-laying starts. Against caterpillars in the ground, the use of hexachlorocyclohexane is recommended. The most effective method against the spider mite, which develops in large quantities in the presence of DDT, is two sprayings of mercaptophos, 0.5-0.8 kg/hectare at the end of June, and 1.0-1.2 kg/hectare at the end of July. -- A. P. Adriarov

Card 3/3

USSR / General and Specialized Zoology - Insects. P

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 20884

Author : Mardzhanyan, G. M.
Inst : AS ArmSSR
Title : The Mallow Moth as an Insect Pest of Cotton and Ways of Finding Methods to Combat It

Orig Pub : Izv. AN ArmSSR. Biol. i s.-kh. n., 1957, 10 No 10, 81-88

Abstract : The results of the work of the Agricultural Institute of Armenia. The biology and harmfulness of the moth are described. The most suitable for the feeding of the caterpillars is the hollyhock (Althaea rosea) of the ordinary and wrinkled varieties, and the least suitable is Althaea cannabina L. The fertility of the butterflies when the

Card 1/3

Mardzhanyan, G.M.

YESAYAN, G.T.; MARDZHANYAN, G.M.; OGANESYAN, R.M.; USTYAN, A.K.

Investigating esters of sulfoacids. Report No.1: Synthesis and acaricide properties of certain esters of γ-chlorocrotylsulfo acid. Izv. AN Arm SSR Ser. khim. nauk 10 no.4:277-282 '57. (MIRA 10:12)

1. Khimicheskiy institut AN ArmSSR i Institut zemledeliya Ministerstva sel'skogo khozyaystva ArmSSR.
(Sulfonic acids)

COUNTRY :
CATEGORY : GENERAL & SPEC. ZOOLOGY. INSECTS

ABS. JOUR : Ref Zhur -Biologiya, No. 4, 1959, No.

AUTHOR :
INST. :
TITLE :

ORIG. PUB.:

ABSTRACT :

CARD: 3 / 3

COUNTRY :
CATEGORY : GENERAL&SPEC.ZOOLOGY.INSECTS

ABS. JOUR.: Ref Zhur -Biologiya, No. 4, 1959, No. 16[illegible]

Author :
INST. :
TITLE :

ORIG. PUB.:

ABSTRACT : to II in its effectivene[illegible] or [illegible] or-
zovi and the leafroller. Phytocidal pro-
perties of I and II were substantially mani-
fested on leaves of the fruit plants in a con-
centration of 0.[illegible], but 0.25 - 0.5[illegible] concentra-
tion of I and 0.5[illegible] concentration of II resulted
in the shedding of the leaves of the apple and
and apricot trees. Of the three chemical poi-
sons tested II was considered to be outstand-
ing. For young orchards and nurseries which

CARD : 2 /3

COUNTRY : USSR P
CATEGORY : GENERAL & SPEC. ZOOLOGY. INSECTS
Insect and Mite Pests.
ABS. JOUR : Ref Zhur -Biologiya, No.4 , 1959, No. 16293

AUTHOR : Mardzhenyan, G.M.; Arakelyan, A.G.; Ust'yan, A.K.
INST. : Armenian Sci.Res.Agric.
TITLE : Experiment on the Application of Phosphoorganic Insecticides in Controlling Pests of Fruit Cultures.

ORIG. PUB.: Byul. nauchno-tekhn. inform. Arm. n.-i. in-t zemledeliya, 1957, No.3, 36-41

ABSTRACT : Effective against the pear psylla with discontinuation of 10 liters on a tree were concentrations of octa ethyl (I) 0.1 - 0.3 % with systemic action (II) for 20 - 25 days, -74 and mercaptophos (II) 0.1 % with PA for 1 - 1.5 months. For peach rot 0.1 % with PA 1 month, but in this case the concentration of -.05 % was also effective for Bryobia redikorzevi 0.1 of I and II with PA 1 month. Both preparations are effective against the apple leafroller. -74 was equal

CARD: 1/3

...RAL&SPEC.ZOOLOGY.INSECTS

ABS. JOUR.: Ref Zhur -Biologiya, No. 4, 1959, No. 16293

Author :
INST. :
TITLE :

ORIG. PUB.:

ABSTRACT: to II in its effectivene... or Bryobia redikorzovi and the leafroller. ...phybocidal properties of I and II were substantially manifested on leaves of the fruit plants in a concentration of 0.2%, but 0.25 - 0.5% concentration of I and 0.3% concentration of II resulted in the shedding of the leaves of the apple and apricot trees. Of the three chemical poisons tested II was considered to be outstanding. For young orchards and nurseries which

CARD: 2/3

49

P

COUNTRY : USSR

CATEGORY : GENERAL & SPEC. ZOOLOGY. INSECTS. Insect and Mite Pests.

ABS. JOUR. : Ref Zhur -Biologiya, [illegible]4, 1959, No. 16293

AUTHOR : Mardzhanyan, G.M.; Arakelyan, A.O.; Ust'yan, A.K.

INST. : Armenian Sci.Res.Agric. [illegible]

TITLE : Experiment on the Application of the Phosphorganic [illegible] Pests of Fruit [illegible] Controlling

ORIG. PUB. : Byul. nauchno-tekhn. inform. Arm. n.-i. in-t zemledeliya, 1957, No.3, 36-41

ABSTRACT : [illegible] against the [illegible] were [illegible] of 10 liter on a tree [illegible] 0.5% [illegible] -74 [illegible] for [illegible] ethyl [illegible] 20 - 25 days, [illegible] for 1 - [illegible] tion [illegible] 0.1 [illegible] of -.05 [illegible] of I and II [illegible] effective [illegible] not [illegible] redikorzovi 0.1 [illegible] -74 [illegible] Both preparations [illegible] leafroller.

[illegible]OVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R00103[illegible]

USSR / General and Specialized Zoology. Insects. Harmful Insects and Acarids. Pests of the Technical, Oil, Medicinal and Essential-Oil Cultures.

Abs Jour : Ref Zhur - Biol., No 18, 1958, No. 82975

Author : Mardzhanyan, G. M.; Chilingaryan, V. A.; Ustyan, A. K.

Inst : Armenian Scientific Institute of the Agriculture Institute

Title : The Application of Mercaptophos in the Struggle Against Suctorial Cotton Pests

Orig Pub : Byul. nauchno-techn. inform. Arm. n.-i. in-t zemled., 1957, No 2, 22-25

Abstract : The results of plot and industrial experiments, in the background of a four- to five-fold DDT dusting per 40 kg/hectare (against the mallow moth), without the addition of the sulphur of the brand 100 f., indicate that mercaptophos (M) is highly effective against the

Card 1/2

MARDZHANYAN, G.M.; YESAYAN, G.T.

New insecticide-acaricide of the group of organic thiocyanates.
Izv.AN Arm.SSR. Biol. i sel'khoz.nauki 9 no.8:59-66 Ag '56.
(MLRA 9:10)

1. Sektor zashchity rasteniy i Khimicheskiy institut Akademii nauk Armyanskoy SSR.

(THIOCYANATES) (INSECTICIDES)

MARDZHANYAN, G.M.

Some results of ten years of scientific research work in the Department for Plant Protection. Izv.AA Arm.SSR.Biol.i sel'khoz. nauki 6 no.12:55-67 '53. (MLRA 9:8)

1. Sektor zashchity rasteniy Akademii nauk Armyanskoy SSR.
(Armenia--Plants, Protection of)

AVETYAN, A.S.; MARDZHANYAN, G.M.

New methods for controlling the flatheaded peach borer (Sphenoptera (Tropeopeltis) anthaxoides) in nurseries. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki 6 no.11:45-51 '53. (MLRA 9:8)

1. Zoologicheskiy institut i sektor zashchity rasteniy AN Arm. SSR.
(Aras Valley--Peach-tree borer) (Fruit--Diseases and pests)

MARDZHANYAN, G.M.

Synthetic organic insecticides and internal therapy in plants. Izv. AN Arm.SSR.Biol.i sel'khoz.nauki. 4 no.1:3-16 '51. (MLRA 9:8)

1. Institut fitopatologii i zoologii Akademii nauk Armyanskoy SSR.
(DDT (Insecticide)) (Benzene hexachloride) (Parathion)

MARDZHANYAN, G.M.

New insecticides Benzenchexachloride and DDT) and the problem of soil pest control in the conditions of the Armenian S.S.R. Izv.AN Arm.SSR. Biol. i sel'khoz. nauki 2 no.2: 175-187 '49. (MLRA 9:8)

1. Institut fitopatologii i zoologii Akademii nauk Armyanskoy SSR.
(ARMENIA--AGRICULTURAL PESTS)
(DDT (INSECTICIDE))
(BENZENE HEXACHLORIDE)

MARDZHANYAN, G.M.

A new hand-operated appliance for spraying rodent burrows. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki. 2 no.1:101-103 '49. (MLRA 9:8)

1. Institut fitopatologii i zoologii Akademii nauk Armyanskoy SSR.
(RODENT CONTROL) (SPRAYING AND DUSTING EQUIPMENT)

MARDZHANYAN, G.M.

Local clays as ingredients of DDT and Genzene hexachloride dusts.
Izv.AN Arm.SSR.Biol.i sel'khoz.nauki. 1 no.3:287-290 '48.(MLRA 9:8)

1. Institut zemledeliya Akademii nauk Armyanskoy SSR.
(DDT (Insecticide)) (Benzene hexachloride) (Armenia--Clay)

MARDZHANYAN, G.M.

Hexaethyltetraphosphate as an insecticide. Izv.AN Arm.SSR.Biol.i Sel'khoz.nauki. 1 no.3:283-286 '48. (MLRA 9:8)

1. Institut zemledeliya Akademii nauk Armyanskoy SSR.
(Tetraphosphates) (Insecticides)

ARSHAKUNI, G.A.; SAFKISYAN, G.Ye.; MARDZHANYAN, P.S.

Basis of agglutination reaction in the 12% sodium chloride solution in brucellosis. Izv. AN Arm. SSR. Biol. nauki 17 no.12:105-108 D '64. (MIRA 18:3)

1. Armyanskiy institut zhivotnovodstva i veterinarii, brutsellezyyy otdel.

MARDZHANYAN, A. O.

MARDZHANYAN, A. O. -- "Crop Rotation of the Basargecharskiy Rayon." Min Higher Education, Georgian Agricultural Inst, Yerevan, 1954 (Dissertation For the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya letopis', No. 37, 3 September 1955

1. MARDZHANYAN, A. M.

2. USSR (600)

4. Automobiles - Transmission Devices

7. Method of increasing the durability of some automobile rods and splines shafts. Avt. trakt. prom. no. 11, 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

MARDZHANYAN, A., inzh.

New method for stamping connecting rods for bicycles.
Prom.Arm. 4 no.1:50-51 Ja '61. (MIRA 14:6)
(Forging)

L 33255-65

ACCESSION NR: AP5005517

apparatus for extraction of xylene and ethylbenzene from the 120-150 C fraction yielded practically the same data as those obtained by extraction of aromatic C_8 compounds from the products of platforming of the corresponding fraction. The extract obtained upon treatment of the 120-150 C catalytic fraction contained somewhat more unsaturated hydrocarbons, which could be removed by known methods (using liquid pyrolysis products); that from the 1:10 mixture hardly differed from that from the platformate (105-140 C). When using this mixture, it is only necessary to increase the power of the extraction machinery by about 10%. Orig. art. has: 3 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 003 OTHER: 000

Card 2/2

L 33255-65 EWT(m)/EPF(c) Pr-4 RM

ACCESSION NR: AP5005517 S/0316/64/000/005/0011/0014

AUTHOR: Sidorchuk, I.I.; Indyukov, N.M.; Mardzhanov, G.M. 17 B

TITLE: Preparation of xylenes from gasolines derived from catalytic cracking

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 5, 1964, 11-14

TOPIC TAGS: xylene production, gasoline, catalytic cracking, reforming, platforming, octane value, unsaturated component, jet extractor

ABSTRACT: The authors studied the preparation of p-xylene from the 120-150 C fraction obtained by cracking and treating gasoline, as compared to that from the 105-140 C fraction obtained by dehydrogenation. Tests were conducted with each of the two above fractions and also with a 1:10 mixture of both in a model apparatus with jet extractors, using aqueous solutions of diethyleneglycol as solvents. It was concluded that xylenes, particularly p-xylene can, in principle, be obtained from gasolines derived from catalytic cracking and treating, which are cheap and plentiful materials. An evaluation of the effect of removing aromatic C_8 compounds on the octane value of the treating-gasoline showed a reduction from 81.4 to 79.1. If only p-xylene was removed, the octane value remained practically unchanged. Tests conducted in the model

Card 1/2

MARDZHANISHVILI, Yu. V.

"Basic Ecological and Biological Factors of Wheat Cultivation in the Steppe Zone of the Kakhetinskikh Rayons of Georgia." Cand Biol Sci, Inst of Botany, Acad Sci Georgian SSR, Tbilisi, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

Mardzhanishvili, K. K.

USSR/ Mathematics - Numbers

Card 1/1 Pub. 86 - 3/37

Authors : Mardzhanishvili, K. K., Prof.

Title : Simple numbers

Periodical : Priroda 44/4, 24 - 28, Apr 1955

Abstract : A brief sketch is given of the history of the theory of numbers and the development of procedures for using them in calculations. The nature of natural and unnatural numbers is explained. Formulas are presented with an account of how the various mathematicians developed them and arrived at solutions by their use. The important role of simple numbers is illustrated by formulas and equations which involve the principle algebraic symbols.

Institution : .....

Submitted : .....

USSR/Mathematics - Prime numbers

Card 1/1 : Pub. 86 - 34/34

Authors : Mardzhanishvili, K. K., Professor

Title : The product of prime numbers

Periodical : Priroda 1, page 128, Jan 1954

Abstract : An answer, in the form of mathematical formulas, is presented to the question on whether there is any large prime number the square of which exceeds the product of all prime numbers preceding this large number.

Institution : .....

Submitted : .....

MARDZHANISHVILI, K.K.

Mardžanišvili, K. K. On some nonlinear systems of equations in integers. Mat. Sbornik N.S. 33(75), 639–675 (1953). (Russian)

This memoir is concerned with the solubility in positive integers $x_1, \cdots, x_s$ of the system of equations

$$(1) \qquad x_1^k + \cdots + x_s^k = N_k \quad (k = l, m, \cdots, n),$$

where $l, m, \cdots, n$ are g distinct positive integers of which n is the greatest. The treatment represents a generalisation of Vinogradov's work [Trav. Inst. Math. Stekloff 23 (1947); these Rev. 10, 599] on Waring's problem, which is the case $g = 1$. Some condition on the relative magnitudes of $N_l, N_m, \cdots, N_n$ is obviously necessary. The author puts $N_k = h_k(N_n)^{k/n}$ for $k = l, m, \cdots, n$, and postulates that the equations $\xi_1^k + \cdots + \xi_s^k = h_k$ $(k = l, m, \cdots, n)$ have a solution in real $\xi_1, \cdots, \xi_s$ for which $\xi_1, \cdots, \xi_s$ and $|\det(\xi_i^{k-1})|$, where $i = 1, \cdots, s$, all have a fixed positive lower bound. Suppose $n \geq 12$ and $f > 3ng$, and put

$$r = [2n \log(10ng) + n \log\log(20ng)] + 1.$$

In the first part of the paper the author obtains a lower bound for the number of solutions of (1) when $s = f + 2gr$. The details of the work are necessarily heavy, as the single integral occurring in the Hardy-Littlewood and Vinogradov work is replaced here by integration over g variables. The significance of the result depends naturally on whether the "singular series" for the problem, which occurs as a factor in the main term of the lower bound, is strictly positive, and this question, which is purely arithmetical, is investigated in the second part of the paper. It is shown that if certain congruences are soluble and if s is greater than a certain number depending on g and on the primes $\leq n^{n+1}$, then the desired property holds. *H. Davenport.*

HARDZHANISHVILI, K.K. (Moscow).

Certain nonlinear systems of equations in integers. Mat.sbor. 33 no.3: 639-675 N-D '53. (MLRA 6:12)
(Numbers, Theory of) (Diophantine analysis)

Mardzanishvili, K. K.

and $\mathfrak{S}_s(N_1, N_2)$ is the singular series. [This first part of the argument, which is based on Vinogradov's method, can also be found in Hua's monograph, The additive theory of prime numbers, Trav. Inst. Math. Stekloff 22 (1947), Chap. 10; these Rev. 10, 597.] Second, he shows that if $N_2 \equiv N_1 \pmod 2$ and $N_2 \equiv s \pmod{24}$, then $\mathfrak{S}_s(N_1, N_2) > C(s) > 0$. The resumé of the author's doctoral dissertation [Uspehi Matem. Nauk (N.S.) 5, no. 1(35), 236–240 (1950); these Rev. 11, 502] seems to indicate that the present paper is essentially the last chapter of that apparently unpublished work. Also the author has asserted in an expository article [Acta Math. Acad. Sci. Hungar. 2, 223–227 (1951); these Rev. 15, 13] that he first obtained the above result in 1942.

P. T. Bateman (Urbana, Ill.).

8-16-52 LL

MARDZHANISHVILI, K.K.

Mathematical Reviews
Vol. 15 No. 2
Feb. 1954
Number Theory

Mardžaniašvili, K. K. On the simultaneous representation of pairs of numbers by sums of prime numbers and their squares. Akad. Nauk Gruzin. SSR. Trudy Mat. Inst. Razmadze 18, 183–208 (1951). (Russian. Georgian summary)

Suppose ϵ is a given positive number $<\frac{1}{2}$ and s is a given positive integer $\geqq 7$. The author proves in full that the system of Diophantine equations (*) $p_1+p_2+\cdots+p_s=N_1$, $p_1^2+p_2^2+\cdots+p_s^2=N_2$ is solvable in prime numbers p_1, $p_2,\cdots,p_s$ provided N_1 and N_2 are sufficiently large positive integers satisfying the requirements $1+\epsilon\leqq N_1N_2^{-\frac{1}{2}}\leqq s^{\frac{1}{2}}-\epsilon$, $N_2\equiv N_1 \pmod 2$, $N_2\equiv s \pmod{24}$. This is done in the usual two steps. First, he proves that if N_1 and N_2 are any positive integers such that $1+\epsilon\leqq N_1N_2^{-\frac{1}{2}}\leqq s^{\frac{1}{2}}-\epsilon$, then the number of solutions of (*) in prime numbers is given by

$$B(N_1N_2^{-\frac{1}{2}}, s)N_2^{(s-1)/2}(\log N_2)^{-s}\mathfrak{S}_s(N_1, N_2) + O(N_2^{(s-1)/2}(\log N_2)^{-s-\omega}),$$

where ω is a certain positive constant,

$$0<C_1(s,\epsilon)<B(N_1N_2^{-\frac{1}{2}}, s)<C_2(s,\epsilon),$$

(OVER)

(6)
4

191T96

USSR/Mathematics - Mathematicians Sep/Oct 51

"Ivan Matveyevich Vinogradov: On the Occassion of His 60th Birthday," K. K. Mardzhanishvili

"Uspekh Matemat Nauk" Vol VI, No 5 (45), pp 190-196

Born in village of Milolyub in the former district of Velikolukskk. In 1910 studied under the Math Phys Faculty of Petersburg U; graduated in 1914. In 1918-20 was docent and professor at Permsk State U; in 1920-34 was professor at Leningrad Polytech Inst and Leningrad State U, where he was given in 1925 the Chair of Number Theory and Probability theory. In 1929 chosen active member of Academy of Sciences

191T96

USSR/Mathematics - Mathematicians Sep/Oct 51
(Contd)

USSR; from 1932 to now director of Math Inst imeni Steklov, Acad Sci USSR. Wrote in 1941 the book "New Method in the Analytical Theory of Numbers," for which he won a Stalin Prize 1st Class. In 1944 he was awarded the Order of Lenin and in 1945, Hero of Socialistic Work. His world-famous works are in the fld of analytical theory of numbers, in which he has created methods also adaptable to the theory of probability. In 1947 he published the monograph "The Method of Trigonometric Sums in the Theory of Numbers."

191T96

MARDZHANISHVILI, K. K.

MARDZANISVILI, K. K.

Mathematical Reviews
Vol. 15 No. 1
Jan. 1954
Number Theory

7-13-54 LL

Math
2
2

Mardžanišvili, K. K. On some additive problems of the theory of numbers. Acta Math. Acad. Sci. Hungar. 2, 223–227 (1951). (Russian)

This is a brief expository paper giving the history of the Waring problem, the Goldbach problem and such extensions as the Waring-Goldbach problem and the simultaneous system analogs. No references to the literature are given. The exposition very closely follows that in the author's paper appearing in Uspehi Matem. Nauk (N.S.) 5, no. 1(35), 236–240 (1950) [these Rev. 11, 502].

L. Schoenfeld (Urbana, Ill.).

MARDZHANISHVILI, K.K.

Mathematical Reviews
Vol. 15 No. 1
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Number Theory

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Mardžanišvili, K. K. On a generalization of Waring's problem. Soobščeniya Akad. Nauk Gruzin. SSR 11, 82–84 (1950). (Russian)

In this paper are stated the analogs of the theorems stated by the author in a previous paper [Doklady Akad. Nauk SSSR (N.S.) 70, 381–383 (1950); these Rev. 11, 502, 872]. Whereas the former paper restricted the variables (in (*) of the preceding review) to prime numbers, the present paper allows the variables to be any positive numbers.

L. Schaeufeld (Urbana, Ill.).

MARDZHANISHVILI, K. K.

Mardžaniašvili, K. K. Ivan Matveevič Vinogradov (for his sixtieth birthday). Uspehi Matem. Nauk (N.S.) 6, no. 5(45), 190–196 (1 plate) (1951). (Russian)

Source: Mathematical Reviews, Vol 13, No. 5

MARDZHANISHVILI, K. K.

2000

Mardžanišvili, K. K. On some additive problems with prime numbers. Uspehi Matem. Nauk (N.S.) 4, no. 1(29), 183–185 (1949). (Russian)

This note announces results on the simultaneous Waring-Goldbach problem, i.e., the problem of finding sufficient conditions for the solvability of the system of Diophantine equations $p_1+\cdots+p_r=N_1, \cdots, p_1^n+\cdots+p_r^n=N_n$, where the p are primes. The author is said to have proved earlier that the asymptotic formula for this problem is valid for $r \geqq r_0 \sim 12.5n^2 \log n$. [A slightly sharper statement of this kind can be deduced from results of L. K. Hua, Quart. J. Math., Oxford Ser. 20, 48–61 (1949); these Rev. 10, 597.] Here the author gives congruence conditions on $N_1, \cdots, N_n$ which ensure that the singular series is bounded away from zero and thus that the simultaneous Waring-Goldbach problem is solvable if $N_1, \cdots, N_n$ are large and their sizes are properly related, r being again of the order of magnitude of a constant times $n^2 \log n$.

P. T. Bateman.

Source: Mathematical Reviews, Vol 11 No. 3

MARDZHANISHVILI, K.K. DOC PHYSICOMATH SCI

Dissertation: "Investigations on Application of the Method of Trigonometric Sums to Additive Problems."

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subject to the conditions $0 \leqq x_j \leqq P$ is $O(P^{2l-s(s+1)/2})$ provided $s > 11$ and $l > (s^2-3)/2$; this result is almost the same as a later result of Vinogradov [ibid. 15, 109–130 (1951), Lemma 7; these Rev. 13, 328]. In the proof of this result, Hua's estimate

$$\sum_{x=1}^{q} e^{2\pi i f(x)/q} = O(q^{1-(1/k)+\varepsilon}),$$

$f(x)$ a polynomial of degree k, is used.

Since the appearance of this paper the author has published two papers in which extensions and improvements are stated [Doklady Akad. Nauk SSSR (N.S.) 70, 381–383 (1950); Uspehi Matem. Nauk (N.S.) 4, no. 1(29), 183–185 (1949); these Rev. 11, 502, 872, 161]. See also the paper reviewed below. *L. Schoenfeld* (Urbana, Ill.).

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MARDZHANISHVILI, K. K.

Mathematical Reviews
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Number Theory

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Mardžanišvili, K. K. On an asymptotic formula of the additive theory of prime numbers. Soobščeniya Akad. Nauk Gruzin. SSR. 8, 597–604 (1947). (Russian)

The author refines a previous paper of his [Izvestiya Akad. Nauk SSSR. Ser. Mat. 4, 193–214 (1940); these Rev. 2, 250] concerned with the number $I=I(N_1, \cdots, N_n; s)$ of solutions $(p_1, \cdots, p_s)$ in primes of the system of equations

$$(*) \qquad N_k=p_1^k+\cdots+p_s^k, \quad k=1, \cdots, n$$

for given $s, N_1, \cdots, N_n$. His final result is that the asymptotic formula, for large n, which he obtained previously for $s>s_0\sim 5n^2 \log n$ also holds if $s>s_1\sim(25/2)n^2 \log n$.

This improvement by a factor of about n has been made possible by the work of Vinogradov and others on exponential sums. Thus, with the aid of such work, the author proves the following lemma which is basic for the improved value of s. The number of integral solutions $(x_1, \cdots, x_{2l})$ of the system of equations

$$x_1^k+\cdots+x_l^k=x_{l+1}^k+\cdots+x_{2l}^k, \quad k=1, \cdots, n,$$

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