



M. NEUMUNZ & SON, INC.

REGISTERED PROFESSIONAL ENGINEERS—MEMBERS A.S.M.E.

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SPECIALISTS
DESIGN & ENGINEERING

VEGETABLE OIL MILLS
FATS & OILS PROCESSES
SPECIAL FOOD PLANTS

CABLE ADDRESSES
"OILMILL" NEW YORK
"NEUMUNZ" NEW YORK

February 27, 1974

Monsanto Industrial Chemicals Co.
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166

Attention: Mr. William J. Raiff, Specialty Products, R & D

Ref: Fryma Latex Test No. 2373

Dear Mr. Raiff:

I am pleased to advise that we sent you today, via air parcel post, the samples listed in the attached Fryma test report. In addition, we can now give you below the following translation of their letter:

"As already advised, we have completed the test with the two drums of Monsanto Latex,. Enclosed please find our test report.

We have strictly followed the instructions of the Monsanto letter of November 26th. However, since we used a VE-I instead of the VE-0, we have increased the suggested capacity from 120 kg/h to 300 kg/h. For the doubled throughput, we have selected 810 kg/h. (Test 2A). With test 2B, we opened the feed valve much too much so that we got a hourly capacity of 4100 kg/h. Even though we have to assume that at that throughput we cannot expect a good volatile removal, we nevertheless sent the 2B sample.

In no test have we encountered any foaming problem. Naturally, there is a small layer of foam on top of the surface but this has no influence on the results inasmuch as only what is removed by the discharge pump determines the results and that product is completely air and foam free because it is drawn off the bottom.

Also, during the entire test we could not detect any film or coagulation development. However, the 1.5 screen seems unsuitable and too fine. There is a possibility that, over a long period, the holes would become clogged up. We, therefore, suggest the use of a long hole screen which has a perforation of 6 to 8 mm long and 2 mm wide.

The capacity for production machines can only be determined after Monsanto has given us the results by analysis. We, therefore, ask you to send us this data as soon as possible.

We look forward to hear from you further on this subject."

RSV 0017938

We are confident that this report is self-explanatory but if you have any questions we would be pleased to discuss this further with you over the phone.

Hoping that the results will be to your fullest satisfaction, and that the tests confirm that processing of latex on this equipment is feasible, we assure you of our continued cooperation towards this goal.

Sincerely,

M. NEUMUNZ & SON, INC.


Peter R. Isler

PRI/1b

RSV 0017939



FRYMA-MASCHINEN AG
Zerkleinerungs- und Verfahrenstechnik
CH-4310 Rheinfelden / Schweiz

FRYMA-MASCHINENBau GmbH
Zerkleinerungs- und Verfahrenstechnik
D-7800 Rheinfelden / Baden

FRYMA Monsanto
LAND USA
SACHBEARBEITER /
ABTEILUNG

DATUM 22.2.74
UNSER ZEICHEN / Hss/cw
PROJEKTNUMMER 78 - 66
VERTRETUNG Heumunz & Son Inc.

VERSUCHSBERICHT NR. 2373 TEST REPORT RAPPORT D'ESSAI

MIT IHREM MATERIAL HABEN WIR LAUT DER FOLGENDEN AUFGABESTELLUNG AUF UNSEREN MASCHINEN VERSUCHE DURCHFÜHRT UND DEREN ERGEBNISSE IN DIESEM BERICHT ZUSAMMENGESTELLT.

WITH YOUR MATERIAL SENT TO US WE HAVE MADE TESTS ON OUR MACHINES AS PER FOLLOWING REQUIREMENTS AND SUMMARIZED ITS RESULTS IN THIS REPORT.

AVEC VOTRE MATERIEL NOUS AVONS EFFECTUE DES ESSAIS SUR NOS MACHINES SELON LES EXIGENCES SUIVANTES, LES RESULTATS SONT REUNIS DANS CE RAPPORT.

MATERIAL / MATERIEL

latex

BESCHAFFENHEIT / QUALITY / QUALITE

liquid

AUFGABEGRÜSSE / STARTING FINENESS / FINESSE DE DEPART

PROBLEM UND AUFGABENSTELLUNG / PROBLEM AND REQUIREMENTS / PROBLEME ET EXIGENCES

1. confirmation of the data for gas removal in a larger plant unit (continuous circulation unit).
2. behaviour of the latex with respect to foaming and formation of coagulum or film.

ZUSAMMENFASSENDE STELLUNGNAHME ZUM VERSUCHSERGEBNIS / SUMMARIZED COMMENTS ON TEST RESULTS
REMARQUES RESUMEES DES RESULTATS

1. The analysis to determine the efficiency of the gas removal of the VC-plant will be made by Monsanto.
2. Foaming has not caused any problem (not even when a thick foam has been introduced in the vacuum vessel).
3. It could not have been observed any coagulum or film formation. Only the 1,5 mm-hole of the sieve of the distributor plate may show clogging and should be exchanged against a longish-type 6 mm-sieve.

RSV 0017940

FRYMA-MASCHINEN AG

VON DILSEN VERSUCHEN ERHALTEN SIE FOLGENDE VERSUCHSMUSTER ZURÜCK / FROM THESE TRIALS WE SEND YOU BACK THE FOLLOWING TEST SAMPLES / NOUS VOUS RETOURNERONS LES PRODUITS D'ESSAI SUIVANTS :

3 200 cc-samples from each test (total 24 bottles)



VERSUCHSPROTOKOLL
TEST PROTOCOL Nr. 2373
PROTOCOLE D'ESSAI

Firma Monsanto
Land USA

Versuchsdatum

Blatt Nr. 1

Total: 2

Versuch Nr. / test no. / no de l'essai (identisch mit Nummer des Ausfall- musters)	1 (test 1A)	2 16 (test 1B)	3 (test 2A)	4 (test 2B)	5 (test 3A)	6 (test 3B)
Maschine, Ausrüstung, Zuführ- aggregate / machine, equipment, feed aggregates / machine, équi- pement, a pégats d'alimentation	machine used for all tests: vacuum deaeration plant VE-1, sieve of the distributor plate 1,5 mm, mohno pump II 30					
Mahlelemente / grinding elements / éléments de broyage	vacuum height for all test ca. 80 Torr					
Mahlspalt / grinding gap / écarte- ment des meules						
Gesamte Durchsatzmenge / total throughput / quantité passée	ca. 100 kg	ca. 100 kg	ca. 20 kg	ca. 25 kg	ca. 100 kg	ca. 100
Stundenleistung / hourly output / débit horaire	ca. 300 kg/h	ca. 300 kg/h	810 kg/h	6900 kg/h	300 kg/h	300 kg/h
Ampère-Aufnahme / ampere con- sumption / consommation d'ampères						
Temperatur / temperature / tem- pérature	temperature for all test 55°C					
Feinheit / fineness / finesse						
Beurteilung des Versuches / esti- mation of test / appréciation de l'essai						

Bemerkungen / remarks / remarques:

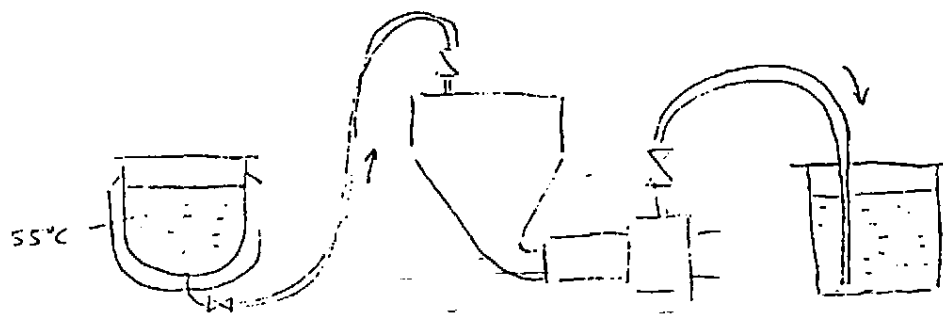
a) Batch Cycle

Run 1 (tests 1A + 1B) : the product processed in test 1A has been processed in a second run (test 1B).

Run 2 (tests 2A + 2B) : same conditions as for run 1, but with different hourly outputs. For both tests, new product has been used.

b) Continuous recycle

Run 3 (tests 3A, B, C + D) : the same product has been recycled 4 times.



VE - I

RSV 0017941



VERSUCHSPROTOKOLL
TEST PROTOCOL Nr. 2373
PROTOCOLE D'ESSAI

Firma Monsanto
Land USA

Versuchsdatum

Blatt Nr. 2

Total: 2

Versuch Nr. / test no. / no de l'essai (identisch mit Nummer des Ausfall- musters)	7 (test 3C)	8 (test 3D)		
Maschine, Ausrüstung, Zufuhr- aggregate / machine, equipment, feed aggregates / machine, équipe- ment, agrégats d'alimentation				
Mahlelemente / grinding elements / éléments de broyage				
Mahlsplatt / grinding gap / écarte- ment des meules				
Gesamte Durchsatzmenge / total throughput / quantité passée	ca. 100 kg/h	ca. 100 kg/h		
Stundenleistung / hourly output / débit horaire	300 kg/h	300 kg/h		
Ampère-Aufnahme / ampere con- sumption / consommation d'ampères				
Temperatur / temperature / tem- pérature				
Feinheit / fineness / finesse				
Beurteilung des Versuches / esti- mation of test / appréciation de l'essai				

Bemerkungen / remarks / remarques:

RSV 0017942