

In the Matter of

CERTAIN APPARATUS FOR FLOW INJECTION ANALYSIS AND COMPONENTS THEREOF

Investigation No. 337-TA-151

USITC PUBLICATION 1665

NOVEMBER 1984

UNITED STATES INTERNATIONAL TRADE COMMISSION

COMMISSIONERS

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UNITED STATES INTERNATIONAL TRADE COMMISSION
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CERTAIN APPARATUS FOR FLOW
INJECTION ANALYSIS AND
COMPONENTS THEREOF

Investigation No. 887-TA-151

COMMISSION MEMORANDUM OPINION

VIEWS OF CHAIRWOMAN STERN, COMMISSIONER LODWICK AND
COMMISSIONER ROHR

This matter came before the Commission on the Commission's order to show cause why the above-captioned investigation should not be terminated as abated as a result of a reexamination certificate amending all the claims of the patent on which the investigation was based.

Background

This investigation was instituted by the Commission on its own motion on June 16, 1983. ^{1/} The notice of investigation defined its scope as the determination of whether there is a violation of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation of certain apparatus for flow injection analysis and components thereof, or in their sale, by reason of alleged:

- (1) Direct infringement of claims 1-6 of U.S. Letters Patent 4,013,413 (the '413 patent);
- (2) Contributory infringement of claims 1-8 of U.S. Letters Patent 4,013,413; and
- (3) Induced infringement of claims 1-8 of U.S. Letters Patent 4,013,413,

the effect or tendency of which is to destroy or substantially injure an industry, efficiently and economically operated, in the United States. The following firms were named respondents in the notice of investigation:

^{1/} 48 F. R. 28560 (June 22, 1983).

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- (1) Perstorp AB, Perstorp, Sweden.
- (2) Pernovo, Perstorp New Business Development AB, Perstorp, Sweden.
- (3) Bifok AB, Sollentuna, Sweden.
- (4) Tecator AB, Hoganas, Sweden.
- (5) Pernovo, Perstorp New Business Development, Inc., Sherman Oaks, Calif.
- (6) Tecator, Inc., Herndon, Va.

Prior to the evidentiary hearing before the administrative law judge (ALJ) the parties agreed to litigate only claims 2, 7 and 8 of the '413 patent. During the course of the investigation, respondents filed a request with the Patent and Trademark Office (PTO) for reexamination of the '413 patent under 35 U.S.C. §§ 302-307. The PTO reexamination proceeding was still pending when, on April 2, 1984, the ALJ filed an initial determination (ID) finding a violation of section 337 based on his finding of infringement of original claims 2, 7 and 8 of the '413 patent. On May 2, 1984, the Commission suspended the investigation pending the outcome of the reexamination proceeding, the completion of which was imminent. The reexamination proceeding was completed on August 28, 1984, with the issuance by the PTO of Reexamination Certificate B1 4,013,413, a copy of which is annexed hereto, which amended all the original claims of the '413 patent and added several new claims. On September 27, 1984, the Commission ordered the Commission investigative attorney to show cause why the investigation should not be terminated as abated as a result of the reexamination certificate amending all the original claims of the '413 patent. 2/ The Commission investigative

2/ 49 F.R. 39117 (October 3, 1984).

attorney timely filed her submission on October 9, 1984; the respondents timely filed their response on October 18, 1984. ³

On November 2, 1984, the Commission determined (1) to terminate the investigation as having abated as a result of the amendment of all the original claims of the '413 patent by the reexamination certificate and (2) to vacate the ID. Accordingly, the Commission issued an appropriate Action and Order and Federal Register notice.

Discussion

Reexamination proceedings are for the purpose of determining the patentability of claims in issued patents over certain types of prior art. No case law has been cited, and none has been found, which defines the effect of amending claims in a reexamination proceeding. The reexamination statute (35 U.S.C. §§ 302-307) provides, in pertinent part, as follows:

In a reexamination proceeding under this chapter, when the time for appeal has expired or any appeal proceeding has terminated, the Commissioner will issue and publish a certificate canceling any claim of the patent finally determined to be unpatentable, confirming any claim of the patent determined to be patentable, and incorporating in the patent any proposed amended or new claim determined to be patentable. [35 U.S.C. § 307(a)]

Thus, there are three separate classes of claims dealt with by a reexamination certificate, and each class is treated differently. The first class, (original) claims finally determined to be unpatentable, are "cancelled". The second class, (original) claims finally determined to be patentable, are "confirmed". The third class, amended or new claims proposed

^{3/} On October 22, 1984, the Commission investigative attorney filed a request for leave to file a reply to respondents' response, to which respondents filed an opposition on October 25, 1984.

by the patent owner (to overcome prior art cited in the reexamination proceeding), are "incorporated in the patent." Thus, amended claims are treated like new claims. Further, 35 U.S.C. § 307(b) makes the intervening rights provision of 35 U.S.C. § 252 (governing the effect of reissue patents) applicable to amended and new claims in reexamination certificates:

Any proposed amended or new claim determined to be patentable and incorporated into a patent following a reexamination proceeding will have the same effect as that specified in section 252 of this title for reissued patents on the right of any person who made, purchased, or used anything patented by such proposed amended or new claim, or who made substantial preparation for the same, prior to issuance of a certificate under the provisions of subsection (a) of this section. [35 U.S.C. § 307(b)]

The cited 35 U.S.C. § 252 reads as follows:

The surrender of the original patent shall take effect upon the issue of the reissued patent, and every reissued patent shall have the same effect and operation in law, on the trial of actions for causes thereafter arising, as if the same had been originally granted in such amended form, but in so far as the claims of the original and reissued patents are identical, such surrender shall not affect any action then pending nor abate any cause of action then existing, and the reissued patent, to the extent that its claims are identical with the original patent, shall constitute a continuation thereof and have effect continuously from the date of the original patent.

No reissued patent shall abridge or affect the right of any person or his successors in business who made, purchased or used prior to the grant of a reissue anything patented by the reissued patent, to continue the use of, or to sell to others to be used or sold, the specific thing so made, purchased or used, unless the making, using or selling of such thing infringes a valid claim of the reissued patent which was in the original patent. The court before which such matter is in question may provide for the continued manufacture, use or sale of the thing made, purchased or used as specified, or for the manufacture, use or sale of which substantial preparation was made before the grant of the reissue, and it may also provide for the continued practice of any process patented by the reissue, practiced, or for the practice of which substantial preparation was made, prior to the grant of the reissue, to the extent and under such terms as the court deems equitable for the protection of investments made or business commenced before the grant of the reissue.

As we understand the argument of the Commission investigative attorney, it is that amended claims 1, 7 and 8 are "identical" to original claims 1, 7 and 8 and thus should be given continuous effect. If this is the case, the investigation should not terminate. Both the Commission investigative attorney and respondents agree that the term "identical" in 35 U.S.C. § 252 means "without substantive change" as set out by the Court of Appeals for the Federal Circuit (CAFC) in Seattle Box Co., Inc. v. Industrial Crating and Packing, Inc., 221 U.S.P.Q. 568 (C.A.F.C. 198-). ^{4/} The parties disagree, however, on how Seattle Box applies to this case. In Seattle Box the CAFC held as follows:

Since we are not asked to, we do not have to decide exactly what "identical" does mean. It is clear, though, that "identical" means at most, "without substantive change." Seattle Box, in broadening its claims' scope to cover not only spacer blocks "greater than" but also "substantially equal to" the diameter of the pipes in a bundle, has, in our view, made substantive change to its claims. The original claims cannot reasonably be read as intending, but for some inaccuracy in their expression, the same coverage as the reissue claims. Here, the addition is not a matter of a mere clarification of language to make specific what was always implicit or inherent.

We hold, therefore, that Seattle Box's broadened reissue claims, with the added words "substantially equal to," are not "identical" to its original claims, assuming "identical" means "without substantive change." [Emphasis supplied].

The principal amendment to claim 2 was to amend the last clause to read "said valve providing means for the sample flow system to be washed out while the valve is transferring a sample into the reaction flow system" instead of "thereby providing means for the sample flow system to be washed out while the

^{4/} The term "identical" occurs only in the first paragraph of 35 U.S.C. § 252, and, arguably, only the second paragraph may have been made applicable by 35 U.S.C. § 307(b). However, the second paragraph of 35 U.S.C. § 252 refers to "a valid claim of the reissued [reexamined] patent which was in the original patent," a phrase which has been treated similarly. See, Chisum, Patents § 15.05[1]-[2].

valve is transferring a sample into the reaction flow system." As to claims 7 and 8, these were principally amended to insert, respectively, the phrases "maintaining the integrity of said sample portion between said transfer step and said mixing step" and "maintaining the integrity of said volume of sample between said transfer step and said mixing step."

It is apparent that the patent owner (the U.S. Department of Agriculture) amended claims 2, 7, and 8 to overcome the examiner's rejection of the original claims as unpatentable over certain prior art. That the claims, as so amended, were then found to be patentable over that prior art clearly implies a change in coverage, i.e., a substantive change. 5/

We cannot accept the argument that the scope of amended claims 2, 7 and 8 is the same as that of original claims 2, 7 and 8. To do so would ignore the prosecution history of the reexamined '413 patent, which estops the patent owner from denying that substantive changes were made, an estoppel which operates whether or not the examiner was wrong in making the rejections he did. 6/ If the patentee thought the examiner was wrong, he should have appealed the examiner's finding of unpatentability of the original claims under 35 U.S.C. § 306, rather than acquiescing in it by amending those claims.

Thus, the claims of the reexamined '413 patent are not identical to the original claims of the '413 patent. Because this investigation and the ID are based exclusively on the original claims and not the reexamined claims, this investigation must be terminated as abated and the ID must be vacated.

5/ See papers Nos. 8, 13 (both) and 14 of the reexamination proceeding, attached as Exhibits D-G of respondents' response, and the May 10, 1984, PTO notice of allowability and reasons for allowance, attached as Exhibit 2 of the Commission investigative attorney's submission.

6/ See, Chisum, Patents, § 18.05[2][a].

Views of Vice Chairman Liebeler and Commissioner Eckes

Subsequent to the filing of the initial determination (ID) by the Administrative Law Judge (ALJ) in Inv. No. 337-TA-151 but before final Commission action on the ID, the Patent and Trademark Office issued a reexamination certificate amending all of the original claims of the patent on which the investigation was based. The question before the Commission is whether the issuance of this certificate requires termination of Inv. No. 337-TA-151 as abated.

We are unable to concur with the Commission majority's determination that termination is mandated. Although the Commission has the authority to act as finder of fact in the first instance, and has done so in the past, the Commission operates most effectively when it delegates the initial factual and legal determinations in unfair trade practice cases to an Administrative Law Judge. The Commission is able to make a more reasoned decision after the ALJ has provided us with his determination and analysis. This step in the procedure should not be foregone in the absence of exigent circumstances. No such exigencies are present in this case.

We would therefore follow the recommendation of the Commission Investigative Attorney and remand the case to the ALJ for the limited purpose of determining whether the cause of action is abated as a result of the issuance of the reexamination certificate.¹

¹Response of CIA to Commission's Order To Show Cause Why The Investigation Should Not Be Terminated As Having Abated, Inv. No. 337-TA-151, at 3 (Oct. 9, 1984).

REEXAMINATION CERTIFICATE (234th)

United States Patent Office

(N) B1 4,013,413

Stewart et al.

[49] Certificate Issued Aug. 28, 1984

[54] APPARATUS AND METHOD FOR RAPID ANALYSES OF PLURALITY OF SAMPLES

[75] Inventors: Kent E. Stewart, Silver Spring; Gary R. Beecher, Laurel; Peter E. Hara, Takoma Park, all of Md.

[73] Assignee: The United States of America as represented by the Secretary of Agriculture, Washington, D.C.

Reexamination Request

No. 90/000,437, Aug. 24, 1983

Reexamination Certificate for:

Patent No.: 4,013,413
 Issued: Mar. 22, 1977
 App. No.: 594,893
 Filed: Jul. 10, 1975

- [51] Int. Cl. G01N 1/00; G01N 31/00; G01N 35/00
- [52] U.S. Cl. 436/53; 422/64; 422/81; 422/82; 436/52
- [53] Field of Search 422/81, 82; 436/52; 436/53; 225/55

[56]

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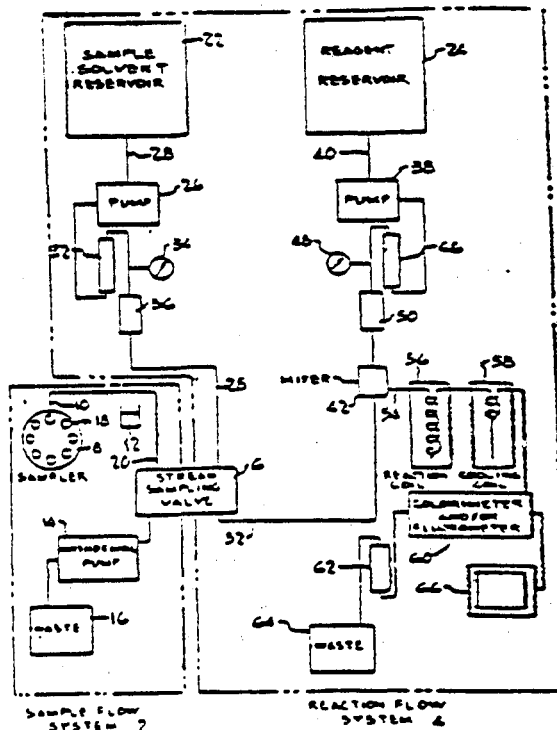
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Primary Examiner—Michael S. Marcus

[57]

ABSTRACT

An apparatus and method for automatically analyzing up to 150 samples per hour with high precision. Air segmentation and its concomitant limitations and drawbacks are eliminated by use of a novel stream sampling valve which transfers a predetermined volume of sample only from a sample flow system to a reaction flow system.



REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307.

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS
BEEN DETERMINED THAT:

Claims 1-3, 7 and 8 are determined to be patentable as amended.

Claims 4-6, dependent on an amended claim, are determined to be patentable.

New claims 9-11 are added and determined to be patentable.

1. An apparatus for rapidly analyzing a plurality of fluid samples, comprising a segmented sample flow system for introducing samples into the apparatus, [a reaction flow system into the apparatus,] a reaction flow system for introducing reagent and sample solvent into the apparatus and for reacting reagent and sample and analyzing the reacted sample, said reaction flow system having means for providing a continual flow of fluid at a constant rate through said system when the apparatus is in operation, and a stream sampling valve common to both the sample flow system and the reaction flow system for transferring a volume of sample only from the sample flow system to the reaction flow system, comprising a plurality of four-way valves, each having a plurality of ports and an element slidably mounted for movement within said valves, said elements being provided with fluid conducting conduits adapted to register with the aforesaid ports to control the flow of fluid through said valves, and a plurality of coils mounted externally of said valves to transport fluids to and from the valves, [thereby] said valve providing means for washing out the sample flow system while the valve is injecting a sample into the reaction flow system.

2. An apparatus for rapid analysis of a plurality of fluid samples, comprising:

- a. a sample flow system for introducing samples sequentially into the system comprising a device for holding a series of samples, means for automatically indexing said device to advance each sample into position in sequence for being introduced into the system, a wash solution reservoir, and means for introducing said samples and wash solution into the system;
- b. a reaction flow system for reacting said fluid samples with reagent and for analyzing the reacted samples comprising a sample solvent reservoir, at least one reagent reservoir, a mixer for mixing sample and reagent, means for transferring solvent and reagent from the reservoirs to the mixer and for providing a continual flow of fluid at a constant rate through the reaction flow system when the apparatus is in operation, a reaction coil connected to the mixer for reacting sample and reagent, and

means for analyzing the reacted sample and for recording the analysis; and

- c. a stream sampling valve common to both (a) and (b) for transferring a known volume of sample only from (a) to (b), comprising a plurality of four-way valves, each having a plurality of ports and an element slidably mounted for movement within said valves, said elements being provided with fluid conducting conduits adapted to register with the aforesaid ports to control the flow of fluid through said valves, and a plurality of coils mounted externally of said valves to transport fluid to and from said valves, [thereby] said valve providing means for the sample flow system to be washed out while the valve is transferring a sample into the reaction flow system.
3. An apparatus for rapid analyses of a plurality of fluid samples, comprising:
- a. a sample flow system for introducing samples sequentially into the system comprising a device for holding a series of samples, means for automatically indexing said device to advance each sample into position in sequence for being introduced into the system, a wash solution reservoir, a probe for introducing sample and wash solution into the system, a pump and conduit connected to said probe to provide continuous suction for the probe and means operable automatically to immerse the probe alternately into the wash solution and into each automatically indexed sample to form a flowing stream of samples separated from each other by successive segments of air, wash solution, and air;
 - b. a reaction flow system for reacting said fluid samples with reagent and for analyzing the reacted samples comprising a sample solvent reservoir, at least one reagent reservoir, a mixer for mixing a sample with reagent, conduits connecting said reservoirs with said mixer, pulse free pumps for delivering solvent and reagent from their respective reservoirs at a predetermined flow rate to the mixer and to the other parts of the system and for providing a continual flow of fluid at a constant rate through the reaction flow system when the apparatus is in operation, a reaction coil for reacting a sample and reagent, a conduit connecting the reaction coil to the mixer, and means for analyzing the reacted sample and for recording the analysis; and
 - c. a stream sampling valve common to both (a) and (b) for taking out a (a) a measured volume of sample only and injecting it into (b), comprising a plurality of four-way valves, each having four ports and an element slidably mounted for movement within said valves, said elements being provided with fluid conducting conduits adapted to register with the aforesaid ports to control the flow of fluid through said valves and a plurality of coils mounted externally of and connected to the ports of said valves to transport fluids to and from said valves, [thereby] said valve providing means for the sample flow system to be washed out while the valve is transferring a sample into the reaction flow system.
7. A method of analysis of a plurality of fluid samples, comprising:
- a. indexing a series of samples in sequence into sampling position;
 - b. introducing the samples into a sample flow system in sequence;

- c. separating successive samples from each other in the sample flow system with individual segments of air, wash solution and air
- d. energizing a stream sampling valve to remove a portion of each sample only and to transfer each of said portions to a reaction flow system in which [fluid] solvent is flowing continually at a constant rate;
- e. mixing and reacting each sample with an appropriate reagent; [and]
- f. maintaining the integrity of said sample portion between said transfer step and said mixing step; and
- g. analyzing the reacted sample.

8. In a method of analysis of a plurality of fluid samples wherein the samples are sequentially transmitted into an apparatus to form a flowing stream wherein each sample is in sequence with the preceding and succeeding samples and each sample is separated from said preceding and succeeding samples by an intervening segment of air and wherein said air-segmented stream of samples is treated for analysis and then analyzed, the improvement which comprises removing from the aforesaid stream a measured volume of sample only, transferring said measured volume of each sample to a non-gas-segmented flowing stream of sample solvent, mixing and reacting each sample with an appropriate reagent, maintaining the integrity of said volume of sample between said transfer step and said mixing step, and analyzing the reacted sample.

9. The apparatus of claims 2 or 3 wherein said reaction flow system includes means to maintain the integrity of said volume of sample as it flows from said valve to said mixer without air segmentation.

10. The apparatus of claims 1, 2 or 3 wherein said ports, coils, slidable elements and conduits in said valve define a plurality of passageways including a first passageway connectable to either said sample flow system or said reaction flow system; a second passageway connectable to said reaction flow system; a third passageway connectable to said sample flow system; wherein each passageway becomes a part of its respective system when connected thereto; and wherein said valve includes means to connect said first passageway to said sample flow system while connecting said second passageway to said reaction flow system; means to thereafter connect said first passageway to said reaction flow system while connecting said third passageway to said sample flow system when said first passageway contains said volume of sample only to thereby transfer said volume from said first passageway to said sample solvent in said reaction flow system, and to permit said sample flow system to be washed out through said third passageway when said volume of sample is being injected into said reaction flow system.

11. The apparatus of claim 1 wherein said reaction flow system comprises a reaction flow conduit connected to said valve, a reagent conduit connected to said reaction flow conduit downstream from said valve for the purpose of said introduction of reagent to react with said volume of sample to form said reacted sample.

12. The apparatus of claim 2 wherein said reaction flow system comprises a reaction flow conduit connected to said valve, a reagent conduit connected to said reaction flow conduit downstream from said valve for the purpose of said transfer of said reagent to react with said known volumes of sample to form said reacted samples.

13. The apparatus of claims 11 or 12 wherein said reaction flow system includes means to maintain the integrity of said volume of sample as it flows from said valve to the

connection between said reaction flow conduit and reagent conduit without air segmentation.

14. The apparatus of claim 1 wherein said reaction flow system includes means to maintain the integrity of said volume of sample as it flows from said valve to said introduction of reagent without air segmentation.

15. The apparatus of claims 1, 2 or 3 wherein said means for providing a continual flow of fluid includes means to provide a flow rate of 0.1 to 25 ml per minute through said reaction flow system.

16. The method of claims 7 or 8 further comprising analyzing 60-150 samples per hour in said reaction flow system.

17. The method of claims 7 or 8 wherein said reaction flow system has a flow rate of 0.1 to 25 ml per minute.

18. A method of analysis of a plurality of fluid samples, comprising:

- a. indexing a series of samples in sequence into sampling position;
- b. introducing the samples into a sample flow system in sequence;
- c. separating successive samples from each other in the sample flow system with individual segments of air, wash solution and air;
- d. energizing a stream sampling valve to remove a portion of each sample only and to transfer each of said portions to a reaction flow system in which sample solvent is flowing continually at a constant rate, to thereby form a continually flowing stream in which each of said portions is interspaced from one another by said solvent;
- e. mixing and reacting each of said portions in said continually flowing stream with an appropriate reagent added to said continually flowing stream downstream from said valve to form reacted sample;
- f. analyzing the reacted sample; and
- g. maintaining the integrity of each of said portions as it flows from said valve to said mixing step without air segmentation.

19. In a method of rapid analysis of a plurality of fluid samples wherein the samples are sequentially transmitted into an apparatus to form a flowing stream wherein each sample is in sequence with the preceding and succeeding samples by an intervening segment of air and wherein said air-segmented stream of samples is treated for analysis and then analyzed, the improvement which comprises removing from the aforesaid stream a measured volume of sample only, transferring said measured volume of each sample to a flowing stream of sample solvent, mixing and reacting each of said measured volumes in said sample solvent with an appropriate reagent added to said sample solvent downstream from said transfer step to form reacted sample, analyzing the reacted sample, and maintaining integrity of said measured volume of sample as it flows from said transfer step to said mixing step without air segmentation.

20. A method for rapid analysis of a plurality of fluid samples, comprising:

- a. indexing a series of samples in sequence into sampling position in a sample holding means;
- b. introducing the samples from the sample holding means into a sample flow conduit in sequence by means of a sample introducing means;
- c. introducing air and wash solution into said sample flow conduit by means of air-introducing means and wash solution-introducing means connected to said sample flow conduit to form a stream of samples in said sample flow conduit in which successive samples

are separated from one another by individual segments of air, wash solution and air.

- c. energizing a stream sampling valve which is connected to said sample flow conduit to remove a portion of each sample only from said sample flow conduit and to transfer each of said portions to a reaction flow conduit also connected to said valve, in which sample solvent is flowing continually at a constant rate to thereby form a continually flowing stream of sample portions interspaced from one another by said sample solvent wherein said reaction flow conduit includes means to introduce said solvent therein;
- e. mixing and reacting each of said sample portions in said reaction flow conduit with reagents by means of a reagent conduit joined to said reaction flow conduit downstream from said valve to form reacted sample in said reaction flow conduit;
- f. analyzing said reacted sample by means of an analyzer connected to said reaction flow conduit downstream from said reagent conduit;
- g. maintaining the integrity of each of said portions as it flows from said valve to said mixing step without air segmentation;

wherein said valve includes first, second and third passageways connectable to said sample and reaction flow conduits in such a manner that a passageway becomes a part of a conduit when connected thereto; wherein said step of sample removal and transfer comprises connecting said first passageway to said sample flow conduit while connecting said second passageway to said reaction flow conduit; thereafter connecting said first passageway to said reaction flow conduit while connecting said third passageway to said sample flow conduit when said first passageway contains said portion of sample only to transfer said portion from said first passageway to said sample solvent in said reaction flow conduit, and to wash out said sample flow conduit through said third passageway while said portion of sample is being injected into said sample solvent in said reaction flow conduit.

21. In a method of analysis of a plurality of fluid samples wherein the samples are sequentially transmitted with air into a sample flow conduit in an apparatus to form a flowing stream in said conduit wherein each sample is in sequence with preceding and succeeding samples by an intervening segment of air, and wherein each of said samples is treated for analysis by adding appropriate reagent thereto from a reagent conduit connected to said apparatus to mix with said samples, wherein each of the samples is reacted with said reagent in a reaction coil connected to said apparatus to form reacted sample, and wherein said apparatus includes an analyzer so that said method includes the step of analyzing the reacted sample, the improvement which comprises removing from the sample flow conduit a measured volume of each sample only and transferring said measured volume to a stream of sample solvent flowing at a constant rate in a reaction flow conduit to thereby form a continually flowing stream in which each of

said measured volumes is interposed from one another by said sample solvent wherein the removal and transfer steps are performed by energizing a stream sampling valve connected to said reaction flow conduit and said sample flow conduit wherein said reagent conduit is connected to said reaction flow conduit downstream from said valve so that said method of analysis includes the step of adding said reagent to each of said measured volumes downstream from said valve to mix with said measured volumes, wherein said reaction coil is connected to said reaction flow conduit downstream from said reagent conduit so that said method of analysis includes the step of reacting said reagent with each of said measured volumes downstream from said reagent conduit to form said reacted sample, wherein said analyzer is connected to said reaction flow conduit downstream from said reaction coil so that said method of analysis includes the step of analyzing said reacted sample downstream from said reaction coil, wherein said method of analysis includes the step of maintaining the integrity of each of said measured volumes as it flows from said valve to said mixing step without air segmentation;

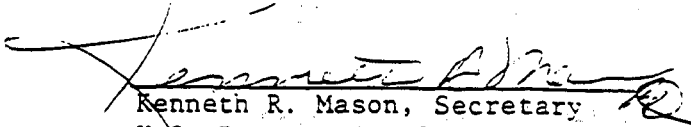
wherein said valve includes first, second and third passageways connectable to said sample and reaction flow conduits in such a manner that a passageway becomes a part of a conduit when connected thereto; wherein the sample removal and transfer steps comprise connecting said first passageway to said sample flow conduit while connecting said second passageway to said reaction flow conduit; thereafter connecting said first passageway to said reaction flow conduit while connecting said third passageway to said sample flow conduit when said first passageway contains said measured volume from said first passageway to said sample solvent in said reaction flow conduit, and to wash out said sample flow conduit through said third passageway while said measured volume is being injected into said reaction flow conduit.

22. A method of analysis of a plurality of fluid samples comprising:

- a. indexing a series of samples in sequence into sampling position;
- b. introducing the samples into a sample flow system in sequence;
- c. separating successive samples from each other in the sample flow system with individual segments of air, wash solution and air;
- d. energizing a stream sampling valve to remove a portion of each sample only and to transfer each of said portions to a reaction flow system in which sample solvent is flowing continually at a constant rate, and to wash out said sample flow system through said valve while each of said portions is being transferred into said reaction flow system;
- e. mixing and reacting each sample with an appropriate reagent; and
- f. analyzing the reacted sample.

CERTIFICATE OF SERVICE

I, Kenneth R. Mason, hereby certify that the attached Commission Memorandum Opinion, was served upon the following parties via first class mail, and air mail where necessary, on November 20, 1981.


Kenneth R. Mason, Secretary
U.S. International Trade Commission
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Washington, D.C. 20436

For: BIFOK AB, PERSTORP AB, PERNOVO, PRESTORP NEW BUSINESS DEVELOPMENT AB,
PERNOVO, PRESTORP NEW BUSINESS DEVELOPMENT INC., TECATOR AB,
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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of)
)
)

CERTAIN APPARATUS FOR FLOW INJECTION)
ANALYSIS AND COMPONENTS THEREOF)
)

Investigation No. 337-TA-151

COMMISSION ACTION AND ORDER

Procedural History

On June 16, 1983, the Commission instituted the above-captioned investigation on its own motion. 48 F.R. 28560 (June 22, 1983). The notice of investigation defined its scope as the determination of whether there is a violation of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation of certain apparatus for flow injection analysis and components thereof, or in their sale, by reason of alleged:

- (1) Direct infringement of claims 1-6 of U.S. Letters Patent 4,013,413 (the '413 patent);
- (2) Contributory infringement of claims 1-8 of U.S. Letters Patent 4,013,413; and
- (3) Induced infringement of claims 1-8 of U.S. Letters Patent 4,013,413,

the effect or tendency of which is to destroy or substantially injure an industry, efficiently and economically operated, in the United States. The following firms were named respondents in the notice of investigation:

- (1) Perstorp AB, Perstorp, Sweden.
- (2) Pernovo, Perstorp New Business Development AB, Perstorp, Sweden.
- (3) Bifok AB, Sollentuna, Sweden.
- (4) Tecator AB, Hoganas, Sweden.
- (5) Pernovo, Perstorp New Business Development, Inc., Sherman Oaks, Calif.
- (6) Tecator, Inc., Herndon, Va.

On April 2, 1984, the presiding officer filed an initial determination (ID) finding a violation of section 337. On May 2, 1984, the Commission suspended this investigation pending outcome of a reexamination proceeding before the Patent and Trademark Office (PTO) involving the '413 patent. 49 F.R. 20763 (May 16, 1984). That proceeding was completed on August 28, 1984, with the issuance by the PTO of a reexamination certificate (No. B1 4,013,413), amending all the original claims of the '413 patent and adding new claims.

A review of the reexamination certificate suggested that this investigation should be terminated as having abated, since all original claims of the '413 patent had been amended. Accordingly, the Commission ordered:

- (1) that the Commission investigative attorney show cause why the investigation should not be terminated as abated as a result of the amendment of all original claims of the '413 patent in the reexamination certificate and
- (2) that the deadline for the Commission's determination regarding whether to review the presiding officer's ID of April 2, 1984, was extended until November 2, 1984.

Action

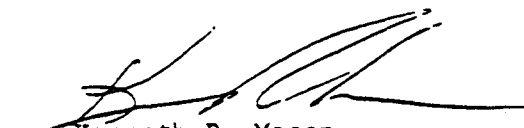
Having considered the submissions received as a result of the order to show cause and the record as a whole, including the PTO reexamination certificate, the Commission has determined (1) to terminate this investigation as having abated as a result of the amendment of all the original claims of the '413 patent by the reexamination certificate and (2) to vacate the presiding officer's ID.

Order

Accordingly, it is hereby ORDERED THAT--

1. Investigation No. 337-TA-151 is terminated as having abated as a result of the amendment of all original claims of U.S. Letters Patent 4,013,413 in reexamination certificate B1 4,013,413.
2. The ID filed by the presiding officer on April 2, 1984, in Inv. No. 337-TA-151 is vacated.
3. The Secretary shall serve copies of this Commission Action and Order upon each party of record to this investigation and publish notice thereof in the Federal Register.

By order of the Commission.

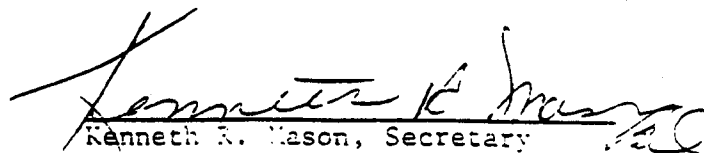


Kenneth R. Mason
Secretary

Issued: November 5, 1984

CERTIFICATE OF SERVICE

I, Kenneth R. Mason, hereby certify that the attached NOTICE OF TERMINATION OF INVESTIGATION, was served upon Patricia Ray, Esq., and upon the following parties via first class mail, and air mail where necessary, on November 5, 1984.



Kenneth R. Mason, Secretary
U.S. International Trade Commission
701 E Street, N.W.
Washington, D.C. 20436

For: BIFOK AB, PERSTORP AB, PERNOVO, PRESTORP NEW BUSINESS DEVELOPMENT AB,
PERNOVO, PRESTORP NEW BUSINESS DEVELOPMENT INC., TECATOR AB,
TECATOR INV.:

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