

ATTORNEY GENERAL - OFFICE COPY

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of the State of California  
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8 Attorneys for the People

10 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
11 FOR THE CITY AND COUNTY OF SAN FRANCISCO

14 PEOPLE OF THE STATE OF CALIFORNIA ex )  
rel. DANIEL E. LUNGREN, Attorney General )  
15 of the State of California, )

16 Plaintiffs, )

17 v. )

18 WARNER-LAMBERT CO.; SMITHKLINE )  
BEECHAM CORP.; AMERICAN HOME )  
19 PRODUCTS CORP.; SOURCE NATURAL, )  
INC.; SCHERING-PLOUGH HEALTH CARE )  
20 PRODUCTS, INC.; PHARMAVITE CORP.; )  
GENERAL NUTRITION CORP.; PERRIGO )  
21 CO.; TWIN LABORATORIES, INC. and DOES )  
1-200 )

22 Defendants.  
23

ENDORSED  
FILED  
San Francisco County Superior Court  
FEB 26 1998  
ALAN CARLSON, Clerk  
BY: CYNTHIA S. REIBERT  
Deputy Clerk

No. 984503

STIPULATION FOR ENTRY OF  
CONSENT JUDGMENT AND  
ORDER THEREON

1 Plaintiff, the People of the State of California ex rel. Daniel E. Lungren ("People")  
2 and defendant Bayer Corporation ("Bayer") herein enter into this Stipulation for Entry of  
3 Consent Judgment (hereinafter "Consent Judgment") as follows:

4 1. Introduction

5 1.1 On February 6, 1997 the People filed a Complaint for Civil Penalties and  
6 Injunctive Relief ("Complaint") in the Superior Court of the State of California, City and  
7 County of San Francisco, against certain defendants. On June 16, 1997, the People served  
8 Bayer as Doe Defendant Number 5.

9 1.2 Bayer is a company that employs more than ten persons and offers for sale  
10 within the State of California one or more of the following calcium-containing products  
11 (hereinafter "Calcium Products") which are intended to be ingested by human beings: (a)  
12 products containing primarily calcium that are intended to provide all or a major portion of  
13 the recommended daily allowance of calcium (hereinafter "Calcium Supplements"), (b)  
14 antacid products containing calcium (hereinafter "Antacids"), and (c) dietary supplements as  
15 defined in the federal Dietary Supplements Health and Education Act, Public Law no. 103-  
16 417, 108 Stat. 4325 (1994), 21 U.S.C. § 321(ff), containing calcium, other than Calcium  
17 Supplements or Antacids (hereinafter Multiple Vitamins/Minerals).

18 1.3 The People's Complaint alleges that Bayer, through the sale of Calcium Products  
19 to consumers in California, violated provisions of the Safe Drinking Water and Toxic  
20 Enforcement Act of 1986, Health and Safety Code sections 25249.5 et seq. ("Proposition  
21 65"), and Business and Professions Code sections 17200 et seq. ("Unfair Competition Act"),  
22 by knowingly exposing persons to lead, a chemical known to the State of California to cause  
23 reproductive toxicity, without first providing a clear and reasonable warning to such  
24 individuals.

25 1.4 For purposes of this Consent Judgment only, the parties stipulate that this Court  
26 has jurisdiction over the allegations of violations contained in the Complaint and personal  
27 jurisdiction over Bayer as to the acts alleged in the Complaint, that venue is proper in the

1 City and County of San Francisco and that this Court has jurisdiction to enter this Consent  
2 Judgment.

3 1.5 The parties enter into this Consent Judgment pursuant to a settlement of certain  
4 disputed claims between the parties as alleged in the Complaint for the purpose of avoiding  
5 prolonged and costly litigation between the parties hereto. By execution of this Consent  
6 Judgment, Bayer does not admit any facts or conclusions of law suggesting or demonstrating  
7 any violations of Proposition 65, the Unfair Competition Act or any other statutory, common  
8 law or equitable requirements relating to Calcium Products. Nothing in this Consent  
9 Judgment shall be construed as an admission by Bayer of any fact, issue of law or violation  
10 of law, nor shall compliance with the Consent Judgment constitute or be construed as an  
11 admission by Bayer of any fact, issue of law, or violation of law. Nothing in this Consent  
12 Judgment shall prejudice, waive or impair any right, remedy or defense Bayer may have in  
13 this or any other or future legal proceedings. However, this paragraph shall not diminish or  
14 otherwise affect the obligations, responsibilities and duties of Bayer under this Consent  
15 Judgment.

16 1.6 On July 25, 1997, this Court entered a stipulated Permanent Injunction  
17 ("Permanent Injunction") between the People and Bayer. A copy of that document is  
18 attached hereto as Exhibit A. The terms of the Permanent Injunction are incorporated into  
19 this Consent Judgment as if fully set forth herein.

20 2. Provisions Concerning Multiple Vitamins/Minerals

21 2.1 Bayer has provided information to the People concerning its current and past  
22 Multiple Vitamins/Minerals. A list of those Multiple Vitamins/Minerals is attached hereto as  
23 Exhibit B. Among the information provided to the People are lead test results from 1993  
24 and 1997 for the Multiple Vitamins/Minerals. Bayer has also provided information  
25 concerning quality control measures it has taken and will continue to take to insure that its  
26 products are in compliance with Proposition 65.

27 2.2 Bayer represents that the test results and other information presented to the

1 People are true and correct and that the 1997 tests were performed using the protocol  
2 attached as Exhibit A to the Permanent Injunction incorporated herein.

3 2.3 Based on Bayer's representations, on the People's own test data and on a  
4 review of the test data presented by Bayer, the People have determined that Bayer's present  
5 products listed in Exhibit B hereto are currently in compliance with Proposition 65 and that  
6 no further injunctive relief is warranted at this time.

7 3. Settlement Payments

8 3.1 Within thirty (30) days of approval of this Consent Judgment, as full, final ~~and~~  
9 complete satisfaction of all claims for civil penalties or restitution for the alleged violations  
10 up to and including the date of entry of this Consent Judgment as set forth in paragraph 9.1,  
11 for Calcium Products, Bayer shall pay the sum of \$2500.00 to the Public Health Trust, a  
12 program of the California Public Health Foundation, to be used for research, investigation  
13 and public education projects approved by the Attorney General and relating to exposure to  
14 lead in pregnancy and/or nutritional factors related to lead exposure among children.  
15 Payment shall be made by delivery of certified funds payable to the Public Health Trust.  
16 Making these payments shall not be construed as an admission by Bayer of any fact, issue of  
17 law or violation of law, nor shall compliance with the Consent Judgment constitute or be  
18 construed as an admission by Bayer of any fact, issue of law, or violation of law.

19 4. Payment of Costs and Fees

20 4.1 Within thirty (30) days of approval of this Consent Judgment, Bayer shall pay  
21 \$2,500.00 as reimbursement for the People's costs of investigating and prosecuting this  
22 action. Payment shall be made by delivery of certified funds in the amount of \$1,250.00  
23 payable to the Attorney General of the State of California at 2101 Webster Street, 12th  
24 Floor, Oakland, California 94612-3049 (Attn: Susan S. Fiering, Deputy Attorney General)  
25 and by the delivery of certified funds in the amount of \$1,250.00 payable to the  
26 Environmental Health Account, Public Health Trust, at 2001 Addison Street, Ste. 210,  
27 Berkeley, CA 94704 (with a copy to Susan S. Fiering, Deputy Attorney General, 2101

1 Webster Street, 12th Floor, Oakland, California 94612-3049).

2 5. Additional Enforcement Actions; Continuing Obligations

3 5.1. By entering into this Consent Judgment, the People do not waive any right to  
4 take further enforcement actions on any violations not covered by the Complaint. Nothing in  
5 this Consent Judgment shall be construed as diminishing Bayer's continuing obligation to  
6 comply with Proposition 65 or the Unfair Competition Act in its future activities.

7 6. Enforcement of Consent Judgment

8 6.1. The People may, by motion or order to show cause before the Superior Court  
9 of San Francisco, enforce the terms and conditions contained in this Consent Judgment. In  
10 any action brought by the People to enforce this Consent Judgment, the People may seek  
11 whatever fines, costs, penalties or remedies as provided by law for failure to comply with the  
12 Consent Judgment. Where said failure to comply constitutes future violations of Proposition  
13 65 or other laws, independent of the Consent Judgment and/or those alleged in the  
14 Complaint, the People are not limited to enforcement of this Consent Judgment, but may  
15 seek in another action whatever fines, costs, penalties or remedies are provided by law for  
16 failure to comply with Proposition 65 or other laws. The rights of Bayer to defend itself and  
17 its actions in law or equity shall not be abrogated or reduced in any fashion by the terms of  
18 this paragraph.

19 7. Application of Consent Judgment

20 7.1 The Consent Judgment shall apply to, be binding upon and inure to the benefit  
21 of. the parties, their divisions, subdivisions, subsidiaries, and affiliates and the successors or  
22 assigns of each of them.

23 8. Authority to Stipulate to Consent Judgment

24 8.1 Each signatory to this Consent Judgment certifies that he or she is fully  
25 authorized by the party he or she represents to enter into this Consent Judgment on behalf of  
26 the party represented and legally to bind that party.

1           9.     Claims Covered

2           9.1    This Consent Judgment is a final and binding resolution between the People  
3 and Bayer of any and all alleged violations of Proposition 65, the Business and Professions  
4 Code Sections 17200 et seq. and/or the Consumers Legal Remedies Act, Civil Code section  
5 1750 et seq. up through the date of entry of this Consent Judgment arising from failure to  
6 warn of exposure to lead from consumption of Bayer's Calcium Products or those of any  
7 corporate affiliate, that was committed by Bayer or by any entity within its respective chain  
8 of distribution, including, but not limited to, distributors, wholesalers and retailers of any of  
9 Bayer's Calcium Products.

10          10.   Modification

11          10.1   This Consent Judgment may be modified from time to time by express written  
12 agreement of Bayer and the Attorney General with the approval of the Court or by an order  
13 of this Court.

14          11.   Execution in Counterparts

15          11.1   This Consent Judgment may be executed in counterparts, which taken together  
16 shall be deemed to constitute one and the same document.

17          12.   Entry of Stipulation for Entry of Consent Judgment  
18 Required

19          12.1   This Stipulation for Entry of Consent Judgment shall be null and void, and be  
20 without any force or effect, unless entered by the Court in this matter. If the Stipulation for  
21 Entry of Consent Judgment is not entered by the Court, the execution of this Stipulation for  
22  
23  
24  
25  
26  
27

1 Entry of Consent Judgment by Bayer shall not be construed as an admission by Bayer of any  
2 fact, issue of law or violation of law.

3 IT IS SO STIPULATED:

4 Dated: 2/20/98, 1998

DANIEL E. LUNGREN, Attorney  
General of the State of  
California  
RODERICK E. WALSTON  
Chief Assistant Attorney General  
THEODORA BERGER  
Assistant Attorney General  
CRAIG C. THOMPSON  
EDWARD G. WEIL  
SUSAN S. FIERING  
Deputy Attorneys General

10 By: 

11 SUSAN S. FIERING  
12 Deputy Attorney General  
13 Attorneys for the People of the  
14 State of California

13 Dated: Feb 4, 1998

BAYER CORPORATION

15 By: 

Jay B. Kolpcn

16 Its: Vice President

19 APPROVED AS TO FORM:

20 Dated: 2/5/98

ORRICK, HERRINGTON & SUTCLIFFE

22 By: 

23 BRUCE KLAFTER Esq.  
24 Attorneys for Bayer Corporation

25 IT IS SO ORDERED:

26 Dated: FEB 24 1998

LUCY KELLY McCABE  
Presiding Judge  
JUDGE, SUPERIOR COURT  
CITY AND COUNTY OF SAN FRANCISCO

**EXHIBIT A**



ATTORNEY GENERAL - OFFICE COPY

1 DANIEL E. LUNGREN, Attorney General  
of the State of California  
2 RODERICK E. WALSTON  
Chief Assistant Attorney General  
3 THEODORA BERGER  
Assistant Attorney General  
4 CRAIG C. THOMPSON  
Supervising Deputy Attorney General  
5 EDWARD G. WEIL  
SUSAN S. FIERING (State Bar No. 121621)  
6 Deputy Attorneys General  
2101 Webster Street, 12th Floor  
7 Oakland, CA 94612-3049  
Telephone: (510) 286-3892  
8 Attorneys for the People  
9

ENDORSED  
FILED  
San Francisco County Superior Court  
JUL 25 1997  
BY: ALAN CARLSON, Clerk  
CYNTHIA S. HERBERT  
Deputy Clerk

10 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
11 FOR THE CITY AND COUNTY OF SAN FRANCISCO  
12  
13

14 PEOPLE OF THE STATE OF CALIFORNIA )  
ex rel. DANIEL E. LUNGREN, Attorney) )  
15 General of the State of California,) )  
16 Plaintiffs, )  
17 v. )  
18 WARNER-LAMBERT CO.; SMITHKLINE )  
BEECHAM CORP.; AMERICAN HOME )  
19 PRODUCTS CORP.; SOURCE NATURAL, )  
INC.; SCHERING-PLOUGH HEALTH CARE )  
20 PRODUCTS, INC.; PHARMAVITE CORP.; )  
GENERAL NUTRITION CORP.; PERRIGO )  
21 CO.; TWIN LABORATORIES, INC. and )  
DOES 1-200 )  
22  
23 Defendants.  
24  
25  
26  
27

No. 984503  
STIPULATION FOR ENTRY OF  
PERMANENT INJUNCTION AND  
FOR PAYMENT OF SETTLEMENT  
AMOUNT AND ORDER THEREON

STIPULATION FOR ENTRY  
OF PERMANENT INJUNCTION  
AND PAYMENT OF SETTLEMENT  
AMOUNT

1 Plaintiff, the People of the State of California ("People")  
2 and defendants Bayer Corporation; Johnson & Johnson/Merck  
3 Consumer Pharmaceuticals; Nutrilite, a Division of Amway  
4 Corporation; and Consac (hereinafter collectively "Settling  
5 Defendants") herein enter into this Stipulation for Entry of  
6 Permanent Injunction and for Payment of Settlement Amount  
7 (hereinafter "Permanent Injunction") as follows:

8 1. Introduction

9 1.1 On February 6, 1997 the People of the State of  
10 California, ex rel. Daniel E. Lungren, ("People") filed a  
11 Complaint for Civil Penalties and Injunctive Relief ("Complaint")  
12 in the Superior Court of the State of California, City and County  
13 of San Francisco, against certain defendants. On June 5, 1997,  
14 the People served the Settling Defendants as Does No. 5 through 8  
15 respectively.

16 1.2 Settling Defendants are companies that employ more  
17 than ten persons and offer for sale within the State of  
18 California one or more of the following calcium-containing  
19 products (hereinafter "Calcium Products") which are intended to  
20 be ingested by human beings: (a) products containing primarily  
21 calcium that are intended to provide all or a major portion of  
22 the recommended daily allowance of calcium (hereinafter "Calcium  
23 Supplements"), (b) antacid products containing calcium  
24 (hereinafter "Antacids"), and (c) dietary supplements as defined  
25 in the federal Dietary Supplements Health and Education Act,  
26 Public Law no. 103-417, 108 Stat. 4325 (1994), 21 U.S.C. §  
27 321(ff), containing calcium, other than Calcium Supplements or

1 Antacids. (hereinafter "Multiple Vitamins/Minerals").  
2 Notwithstanding any form of packaging of two or more different  
3 Calcium Products together, the requirements of this Permanent  
4 Injunction shall apply separately to each such different Calcium  
5 Product. The term "calcium" as used in this Permanent Injunction  
6 means elemental calcium when referring to an amount of calcium  
7 and means any form or salt of calcium when referring to calcium  
8 as an ingredient (active or inactive) in a Calcium Product. For  
9 purposes of this Permanent Injunction, the "date of shipment"  
10 shall be the date on which the Calcium Product first enters the  
11 stream of commerce; except that, where a Settling Defendant is  
12 both a manufacturer and a retailer of the Calcium Product, "date  
13 of shipment" shall mean the date on which a Calcium Product is  
14 transferred from the manufacturing segment of the Settling  
15 Defendant's business.

16 1.3 The People's Complaint alleges that Settling  
17 Defendants, through the sale of Calcium Products to consumers in  
18 California, violated provisions of the Safe Drinking Water and  
19 Toxic Enforcement Act of 1986, Health and Safety Code  
20 sections 25249.5 et seq. ("Proposition 65"), and Business and  
21 Professions Code sections 17200 et seq. ("Unfair Competition  
22 Act"), by knowingly exposing persons to lead, a chemical known to  
23 the State of California to cause reproductive toxicity, without  
24 first providing a clear and reasonable warning to such  
25 individuals.

26 1.4 For purposes of this Permanent Injunction only, the  
27 parties stipulate that this Court has jurisdiction over the

1 allegations of violations contained in the Complaint and personal  
2 jurisdiction over the Settling Defendants as to the acts alleged  
3 in the Complaint, that venue is proper in the City and County of  
4 San Francisco and that this Court has jurisdiction to enter this  
5 Permanent Injunction.

6       1.5 The parties enter into this Permanent Injunction  
7 pursuant to a settlement of certain disputed claims between the  
8 parties as alleged in the Complaint for the purpose of avoiding  
9 prolonged and costly litigation between the parties hereto. By  
10 execution of this Permanent Injunction, Settling Defendants,  
11 individually and collectively, do not admit any facts or  
12 conclusions of law suggesting or demonstrating any violations of  
13 Proposition 65, the Unfair Competition Act or any other  
14 statutory, common law or equitable requirements relating to  
15 Calcium Products. Nothing in this Permanent Injunction shall be  
16 construed as an admission by Settling Defendants of any fact,  
17 issue of law or violation of law, nor shall compliance with the  
18 Permanent Injunction constitute or be construed as an admission  
19 by such Settling Defendants of any fact, issue of law, or  
20 violation of law. Nothing in this Permanent Injunction shall  
21 prejudice, waive or impair any right, remedy or defense such  
22 Settling Defendants may have in this or any other or future legal  
23 proceedings. However, this paragraph shall not diminish or  
24 otherwise affect the obligations, responsibilities and duties of  
25 such Settling Defendants, individually or collectively, under  
26 this Permanent Injunction.

27       2.     Injunctive Relief - Warning Program

1           2.1 Where required herein, clear and reasonable warning  
2 that use of Calcium Products exposes persons to lead, a chemical  
3 known to the State of California to cause birth defects or other  
4 reproductive harm, shall be provided by a Settling Defendant in  
5 the manner provided in this Permanent Injunction.

6           2.2 A Settling Defendant shall provide a warning, pursuant  
7 to paragraph 2.5, for each Calcium Product whose date of shipment  
8 is on or after July 1, 1997, unless the Settling Defendant can  
9 show, pursuant to paragraph 2.10 and the testing protocol set  
10 forth in Exhibit A attached to this Permanent Injunction, that  
11 the Calcium Product causes a total daily exposure to lead of 0.5  
12 micrograms or less, based on the amount of the Calcium Product  
13 supplying a thousand (1,000) milligrams of elemental calcium,  
14 excluding any naturally occurring lead in the Calcium Product as  
15 set forth in paragraph 2.3 below. For those Calcium Products  
16 where the recommended or maximum daily dose supplies more than  
17 1500 milligrams of calcium, a Settling Defendant shall provide a  
18 warning unless the Settling Defendant can show, pursuant to  
19 paragraph 2.10 and the testing protocol set forth in attached  
20 Exhibit A, that the recommended daily dose of the Calcium Product  
21 causes a total daily exposure to lead equal to or less than that  
22 set forth in paragraph 2.4 below.

23           2.3 A Settling Defendant shall be entitled to exclude from  
24 the calculation of the daily lead exposure caused by a Calcium  
25 Product the amount of lead per 1000 milligrams of calcium as set  
26 forth in Table 2.3 of this paragraph 2.3. Compliance with this  
27 Permanent Injunction is established and no warning is required

1 under Proposition 65 where the lead exposure caused by an amount  
2 of the Calcium Product supplying 1000 milligrams of calcium does  
3 not exceed the sum of: (a) 0.5 micrograms of lead per thousand  
4 milligrams of elemental calcium and (b) the amount of lead  
5 excluded on the date of shipment as "naturally occurring"  
6 pursuant to Table 2.3 of this paragraph 2.3. For purposes of  
7 this Permanent Injunction, Table 2.3 of this paragraph 2.3 sets  
8 forth the amount of lead per 1000 milligrams of elemental calcium  
9 which shall be deemed to be "naturally occurring" at the "lowest  
10 level currently feasible" pursuant to Section 12501 of Title 22  
11 of the California Code of Regulations ("CCR"). The amounts of  
12 lead and dates set forth in Table 2.3 shall apply as of the date  
13 of shipment of the Calcium Product.

14 **TABLE 2.3**

15 DATE	NATURALLY OCCURRING AMOUNT OF LEAD PER 1000 MILLIGRAMS OF CALCIUM
16 July 1, 1997	3.5 micrograms
17 April 1, 1999	1.0 microgram

18 2.4 Even if no warning is required by paragraphs 2.2 and  
19 2.3 above, in the event that the recommended daily dose of any  
20 Calcium Product, as specified on the label or in any other  
21 package material, exceeds 1500 milligrams, a Settling Defendant  
22 shall provide a warning pursuant to Propcsition 65 if the total  
23 daily lead exposure from the Calcium Product, based on the  
24 recommended daily dose, exceeds 150% of the level that would  
25 require a warning pursuant to paragraphs 2.2 and 2.3 (based on a  
26 an amount of the Calcium Product supplying 1000 milligrams of  
27



1 printed on the labeling itself the warning shall be contained in  
2 the same section of the labeling that states other safety  
3 warnings concerning the use of the product. The Attorney General  
4 agrees to review any labeling or point of sale signs proposed to  
5 be used under this section and advise the Settling Defendant as  
6 to whether he believes such labeling or point of sale signs  
7 comply with this section. The requirement for product labeling,  
8 set forth herein is imposed pursuant to the terms of this  
9 Permanent Injunction and is recognized by the parties as not  
10 being the exclusive method of providing a warning under  
11 Proposition 65 and its implementing regulations for the Calcium  
12 Products.

13       2.7 In the event that the Attorney General determines that  
14 the naturally occurring levels set forth in Table 2.3 of  
15 paragraph 2.3 above are higher than the "lowest level currently  
16 feasible" as stated in 22 CCR section 12501(a)(4), he shall have  
17 the right to seek a modification of the Permanent Injunction to  
18 reflect the alleged "lowest level currently feasible" of  
19 naturally occurring lead in the Calcium Products. Prior to  
20 seeking such modification, the Attorney General shall provide  
21 written notice to the Settling Defendants that he intends to seek  
22 the modification. The parties shall have ninety (90) days in  
23 which to confer with the Attorney General concerning the  
24 modification. If one or more of the Settling Defendants and the  
25 Attorney General are unable to agree on a modification to the  
26 Permanent Injunction the Attorney General may file a motion with  
27 the Court, seeking a modification of the Permanent Injunction.



1 In any motion by the Attorney General seeking such a  
2 modification, the burden of producing evidence shall be initially  
3 upon the Attorney General to demonstrate a prima facie case that  
4 the modification sought by the Attorney General is the "lowest  
5 level currently feasible." The Settling Defendants who do not  
6 agree to such modification retain the ultimate burden of proving  
7 that the modification sought by the Attorney General is lower  
8 than the "lowest level currently feasible." The parties hereby  
9 agree that the Permanent Injunction should be modified to reflect  
10 any agreement of the parties or any determination by the Court  
11 concerning what is the "lowest level currently feasible" for lead  
12 in Calcium Products.

13 2.8 In the event that Settling Defendants, individually or  
14 collectively, determine that the naturally occurring levels set  
15 forth in Table 2.3 of paragraph 2.3 above are lower than the  
16 "lowest level currently feasible," as stated in 22 CCR section  
17 12501(a)(4), such Settling Defendants shall have the right to  
18 seek modification of the Permanent Injunction to reflect the  
19 alleged "lowest level currently feasible." Prior to seeking such  
20 modification, such Settling Defendants shall provide written  
21 notice to the Attorney General that they intend to seek the  
22 modification. The parties shall have ninety (90) days in which  
23 to confer concerning the modification. If the parties are unable  
24 to agree on a modification to the Permanent Injunction such  
25 Settling Defendants may file a motion with the Court, seeking a  
26 modification of the Permanent Injunction. In any motion by  
27 Settling Defendants seeking such modification, the burden of

1 producing evidence and of proof shall be on such Settling  
2 Defendants to prove that the modification sought by the Settling  
3 Defendants is the "lowest level currently feasible." The parties  
4 hereby agree that the Permanent Injunction should be modified to  
5 reflect any agreement of the parties or any determination by the  
6 Court concerning what is the "lowest level currently feasible"  
7 for lead in Calcium Products.

8       2.9 The term "feasible" as used in paragraphs 2.7 and 2.8  
9 above includes, but is not limited to, a consideration of the  
10 following factors: availability and reliability of a supply of  
11 low-lead calcium that meets the requirements set forth in  
12 paragraphs 2.2, 2.3 and 2.4 above; cost of low-lead calcium and  
13 resulting increase in manufacturers' prices resulting from the  
14 use of the low-lead calcium; performance characteristics of low-  
15 lead calcium and of the resulting Calcium Product, including, but  
16 not limited to formulation, performance, safety, efficacy and  
17 stability. Nothing in this Permanent Injunction shall be  
18 interpreted to require the Settling Defendants to use any calcium  
19 material as an ingredient in a Calcium Product that would render  
20 their Calcium Product unlawful under state or federal law as  
21 measured by existing and/or future applicable California and  
22 federal food and drug laws and regulations. Nothing in this  
23 Permanent Injunction shall be interpreted to preclude a Settling  
24 Defendant from advocating, for purposes of paragraphs 2.7 and/or  
25 2.8 that any proposed modification requiring a change in the type  
26 of raw calcium source material as an ingredient in a Calcium  
27 Product is not feasible as defined herein. Nothing in this

1 Permanent Injunction shall be interpreted to preclude the People  
2 from advocating, for purposes of paragraphs 2.7 and/or 2.8 that  
3 any proposed modification requiring a change in the type of raw  
4 calcium source material as an ingredient in a calcium product is  
5 feasible as defined herein.

6       2.10 Each Settling Defendant shall maintain records  
7 sufficient to establish its compliance with this Permanent  
8 Injunction for a period of four years following the date of  
9 shipment of any Calcium Product into California. Such documents  
10 shall be sufficient in detail to establish compliance with the  
11 Protocol set forth in the attached Exhibit A. Upon reasonable  
12 written notice from the Attorney General's Office, a Settling  
13 Defendant must produce to the Attorney General within ten (10)  
14 business days of the receipt of the Attorney General's notice,  
15 the documents required to be maintained according to this  
16 paragraph. To the extent that such documents contain information  
17 which the Settling Defendant maintains is confidential,  
18 proprietary, and/or in the nature of a trade secret (or in fact a  
19 trade secret), and upon written notice as to the asserted  
20 confidential nature of this information by the Settling  
21 Defendant, the Attorney General agrees not to disclose this  
22 information to third parties (though the Attorney General may  
23 disclose this information to its attorneys and employees,  
24 including professional consultants, provided that these persons  
25 also agree to maintain the confidentiality of the information in  
26 these documents). In addition, any Settling Defendant may  
27 designate as confidential "trade secret" information as that term

1 is defined in California Government Code section 6254.7 any data  
2 provided to the Attorney General's Office pursuant to this  
3 paragraph or any other provision of this Permanent Injunction or  
4 relating to the subject matter hereof and such information shall  
5 not be released to any member of the public. Provided, however,  
6 that nothing in this provision shall prohibit the Attorney  
7 General from disclosing information and/or data designated as  
8 confidential, proprietary and/or trade secret to other government  
9 agencies as is necessary in pursuit of his enforcement authority.  
10 Furthermore, nothing in this provision shall prohibit the  
11 Attorney General from applying to the Court for a ruling  
12 determining that the information and/or data designated by a  
13 Settling Defendant as confidential, proprietary and/or trade  
14 secret should not be so designated and may be freely disclosed.

15 3. Settlement Payments

16 3.1 Within thirty (30) days of execution of this Permanent  
17 Injunction, as full, final and complete satisfaction of all  
18 claims for civil penalties or restitution for the alleged  
19 violations up to and including July 1, 1997 as set forth in  
20 paragraph 10.1, for Calcium Supplements and Antacids, Settling  
21 Defendants shall pay the sum of \$395,500 to the Public Health  
22 Trust, a program of the California Public Health Foundation to be  
23 used for research, investigation and public education projects  
24 approved by the Attorney General and relating to exposure to lead  
25 in pregnancy and/or nutritional factors related to lead exposure  
26 among children. Payment shall be made by delivery of certified  
27 funds payable to the Public Health Trust. Making these payments

1 shall not be construed as an admission by Settling Defendants of  
2 any fact, issue of law or violation of law, nor shall compliance  
3 with the Permanent Injunction constitute or be construed as an  
4 admission by such Settling Defendants of any fact, issue of law,  
5 or violation of law.

6 4. Payment of Costs and Fees

7 4.1 Within thirty (30) days of execution of this Permanent  
8 Injunction, Settling Defendants shall pay \$50,000 as  
9 reimbursement for the Attorney General's costs of investigating  
10 and prosecuting this action. Payment shall be made by delivery  
11 of certified funds payable to the Attorney General of the State  
12 of California at 2101 Webster Street, 12th Floor, Oakland,  
13 California 94612-3049 (Attn: Susan S. Fiering, Deputy Attorney  
14 General).

15 5. Additional Enforcement Actions; Continuing Obligations

16 5.1. By entering into this Permanent Injunction, the People  
17 do not waive any right to take further enforcement actions on any  
18 violations not covered by the Complaint. Nothing in this  
19 Permanent Injunction shall be construed as diminishing each  
20 Settling Defendant's continuing obligation to comply with  
21 Proposition 65 or the Unfair Competition Act in its future  
22 activities.

23 6. Enforcement of Permanent Injunction

24 6.1. The People may, by motion or order to show cause before  
25 the Superior Court of San Francisco, enforce the terms and  
26 conditions contained in this Permanent Injunction. In any action  
27 brought by the People to enforce this Permanent Injunction, the

1 People may seek whatever fines, costs, penalties or remedies as  
2 provided by law for failure to comply with the Permanent  
3 Injunction. Where said failure to comply constitutes future  
4 violations of Proposition 65 or other laws, independent of the  
5 Permanent Injunction and/or those alleged in the Complaint, the  
6 People are not limited to enforcement of this Permanent  
7 Injunction but may seek in another action whatever fines, costs,  
8 penalties or remedies are provided by law for failure to comply  
9 with Proposition 65 or other laws. In any such future action,  
10 the standards and protocol set forth in Section 2 above, as they  
11 may be modified from time to time pursuant to paragraphs 2.7 or  
12 2.8 shall apply. However, the rights of the Settling Defendants  
13 to defend themselves and their actions in law or equity shall not  
14 be abrogated or reduced in any fashion by the terms of this  
15 paragraph.

16 7. Application of Permanent Injunction

17 7.1 The Permanent Injunction shall apply to, be binding  
18 upon and inure to the benefit of, the parties, their divisions,  
19 subdivisions, subsidiaries, and affiliates and the successors or  
20 assigns of each of them.

21 8.0 Application of Testing Standard and Protocol

22 8.1 The testing standard and protocol set forth in Exhibit  
23 A attached to this Permanent Injunction are based on  
24 determinations concerning the nature of the laboratory test used  
25 and its relationship to actual and specific conditions of Calcium  
26 Product use. This Permanent Injunction, including, but not  
27 limited to, this standard and protocol, is the product of

1 negotiation and compromise and is accepted by the parties, for  
2 purposes of settling, compromising and resolving issues disputed  
3 in this action, including future compliance by the Settling  
4 Defendants with Section 2 of this Permanent Injunction and shall  
5 not be used for any other purpose, or in any other matter and,  
6 except for the purpose of determining future compliance with this  
7 Permanent Injunction, shall not constitute an adoption or  
8 employment of a method of analysis for a listed chemical in a  
9 specific medium as set forth in 22 CCR section 12901(b).

10 9. Authority to Stipulate to Permanent Injunction

11 9.1 Each signatory to this Permanent Injunction certifies  
12 that he or she is fully authorized by the party he or she  
13 represents to enter into this Permanent Injunction on behalf of  
14 the party represented and legally to bind that party.

15 10. Claims Covered

16 10.1 This Permanent Injunction is a final and binding  
17 resolution between the People and each Settling Defendant of any  
18 and all alleged violations of Proposition 65, the Business and  
19 Professions Code Sections 17200 et seq. and/or the Consumers  
20 Legal Remedies Act, Civil Code section 1750 et seq. up through  
21 July 1, 1997 arising from failure to warn of exposure to lead  
22 from consumption of any Settling Defendant's Calcium Supplements  
23 and/or Antacids or those of any corporate affiliate, that was  
24 committed by the named Settling Defendant or by any entity within  
25 its respective chain of distribution, including, but not limited  
26 to, distributors, wholesalers and retailers of any of the  
27 Settling Defendant's Calcium Supplements and/or Antacids. This

1 Permanent Injunction does not resolve any issues concerning  
2 Settling Defendants' Multiple Vitamins/Minerals as defined in  
3 paragraph 1.2(c) above. The list of past and current Calcium  
4 Supplements and Antacids to be governed by this Permanent  
5 Injunction is set forth as Exhibit B attached to this Permanent  
6 Injunction. All new Calcium Supplements and Antacids hereafter  
7 introduced into the stream of commerce for distribution or sale  
8 in California shall be governed by this Permanent Injunction.  
9 Nothing in this Permanent Injunction shall preclude one or more  
10 Settling Defendants from establishing that any non-calcium  
11 ingredient in a Calcium Product, other than Calcium Supplements  
12 and Antacids, contains naturally occurring lead at the "lowest  
13 level currently feasible" pursuant to 22 CCR section 12501.

14 11. Modification

15 11.1 This Permanent Injunction may be modified from time to  
16 time by express written agreement of all Settling Defendants and  
17 the Attorney General with the approval of the Court or by an  
18 order of this Court.

19 12. Execution in Counterparts

20 12.1 This Permanent Injunction may be executed in  
21 counterparts, which taken together shall be deemed to constitute  
22 one and the same document.

23 13. Entry of Stipulation for Entry of Permanent Injunction  
24 Required

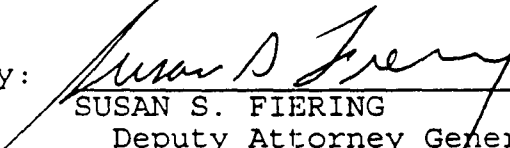
25 13.1 This Stipulation for Entry of Permanent Injunction  
26 shall be null and void, and be without any force or effect,  
27 unless entered by the Court in this matter. If the Stipulation



1 for Entry of Permanent Injunction is not entered by the Court,  
2 the execution of this Stipulation for Entry of Permanent  
3 Injunction by any Settling Defendant shall not be construed as an  
4 admission by a Settling Defendant of any fact, issue of law or  
5 violation of law.

6 IT IS SO STIPULATED:

7 Dated: 7/18, 1997 DANIEL E. LUNGREN, Attorney  
8 General of the State of  
9 California  
10 RODERICK E. WALSTON  
11 Chief Assistant Attorney General  
12 THEODORA BERGER  
13 Assistant Attorney General  
14 CRAIG C. THOMPSON  
15 EDWARD G. WEIL  
16 SUSAN S. FIERING  
17 Deputy Attorneys General

18 By:   
19 SUSAN S. FIERING  
20 Deputy Attorney General  
21 Attorneys for the People of the  
22 State of California

23 Dated: BAYER CORPORATION

24 By: \_\_\_\_\_

25 Its: \_\_\_\_\_

26 Dated: JOHNSON & JOHNSON\MERCK CONSUMER  
27 PHARMACEUTICALS

By: \_\_\_\_\_

Its: \_\_\_\_\_

1 for Entry of Permanent Injunction is not entered by the Court,  
2 the execution of this Stipulation for Entry of Permanent  
3 Injunction by any Settling Defendant shall not be construed as an  
4 admission by a Settling Defendant of any fact, issue of law or  
5 violation of law.

6 IT IS SO STIPULATED:

7 Dated: \_\_\_\_\_, 1997 DANIEL E. LUNGREN, Attorney  
8 General of the State of  
9 California  
10 RODERICK E. WALSTON  
11 Chief Assistant Attorney General  
12 THEODORA BERGER  
13 Assistant Attorney General  
14 CRAIG C. THOMPSON  
15 EDWARD G. WEIL  
16 SUSAN S. FIERING  
17 Deputy Attorneys General

18 By: \_\_\_\_\_  
19 SUSAN S. FIERING  
20 Deputy Attorney General  
21 Attorneys for the People of the  
22 State of California

23 Dated: July 10, 1997

BAYER CORPORATION

24 By: Richard W. Frank  
25 Its: Senior Vice President

26 Dated:

JOHNSON & JOHNSON\MERCK CONSUMER  
27 PHARMACEUTICALS

By: \_\_\_\_\_  
Its: \_\_\_\_\_

STIPULATION FOR ENTRY  
OF PERMANENT INJUNCTION  
AND PAYMENT OF SETTLEMENT  
AMOUNT

1 for Entry of Permanent Injunction is not entered by the Court,  
2 the execution of this Stipulation for Entry of Permanent  
3 Injunction by any Settling Defendant shall not be construed as an  
4 admission by a Settling Defendant of any fact, issue of law or  
5 violation of law.

6 IT IS SO STIPULATED:

7 Dated: \_\_\_\_\_, 1997 DANIEL E. LUNGREN, Attorney  
8 General of the State of  
9 California  
10 RODERICK E. WALSTON  
11 Chief Assistant Attorney General  
12 THEODORA BERGER  
13 Assistant Attorney General  
14 CRAIG C. THOMPSON  
15 EDWARD G. WEIL  
16 SUSAN S. FIERING  
17 Deputy Attorneys General

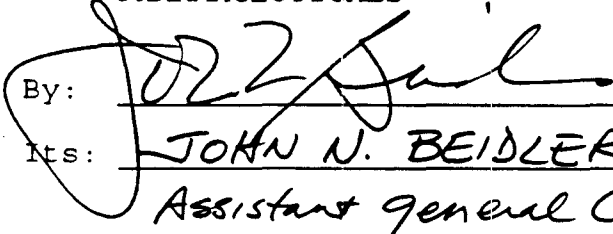
By: \_\_\_\_\_  
SUSAN S. FIERING  
Deputy Attorney General  
Attorneys for the People of the  
State of California

18 Dated: BAYER CORPORATION

19 By: \_\_\_\_\_

20 Its: \_\_\_\_\_

21 Dated: 7/10/97 JOHNSON & JOHNSON\MERCK CONSUMER  
22 PHARMACEUTICALS

23 By:   
24 Its: JOHN N. BEIDLER  
25 Assistant General Counsel  
26  
27

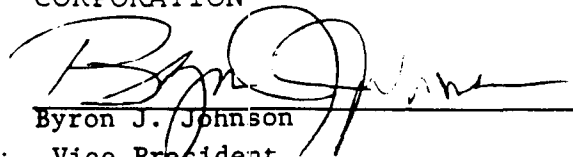
1 Dated:

NUTRILITE, A DIVISION OF AMWAY CORPORATION

2

3

By:



Byron J. Johnson

4

Its: Vice President

5

Dated:

CONSAC

6

7

By: \_\_\_\_\_

8

Its: \_\_\_\_\_

9

10 APPROVED AS TO FORM:

11 Dated:

PRESTON GATES & ELLIS LLP

12

By: \_\_\_\_\_

13

ROGER LANE CARRICK, Esq.

14

15 IT IS SO ORDERED:

LUCY KELLY MCGABE  
Presiding Judge

16 Dated:       JUL 24 1997      

\_\_\_\_\_  
Judge, Superior Court  
City and County of San Francisco

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Dated:

NUTRILITE, A DIVISION OF AMWAY CORPORATION

By: \_\_\_\_\_

Its: \_\_\_\_\_

Dated:

7/9/97

CONSAC

By: Gary Forster Q.P. Stetson

Its: V.P. Jindane

APPROVED AS TO FORM:

Dated:

PRESTON GATES & ELLIS LLP

By: \_\_\_\_\_  
ROGER LANE CARRICK, Esq.

IT IS SO ORDERED:

Dated: \_\_\_\_\_

\_\_\_\_\_  
Judge, Superior Court  
City and County of San Francisco

STIPULATION FOR ENTRY  
OF PERMANENT INJUNCTION  
AND PAYMENT OF SETTLEMENT  
AMOUNT

1 Dated:

NUTRILITE, A DIVISION OF AMWAY  
CORPCRATION

2

3

By: \_\_\_\_\_

4

Its: \_\_\_\_\_

5

Dated:

CONSAC

6

7

By: \_\_\_\_\_

8

Its: \_\_\_\_\_

9

10 APPROVED AS TO FORM:

11 Dated:

*July 17, 1997*

PRESTON GATES & ELLIS LLP

12

By: \_\_\_\_\_

*[Signature]*  
ROGER LANE CARRICK, Esq.

13

14

15 IT IS SO ORDERED:

16 Dated: \_\_\_\_\_

\_\_\_\_\_  
Judge, Superior Court  
City and County of San Francisco

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STIPULATION FOR ENTRY  
OF PERMANENT INJUNCTION  
AND PAYMENT OF SETTLEMENT  
AMOUNT

**EXHIBIT A**

# **Calcium Containing Finished Product Lead Testing Protocol**

## **Inductively Coupled Plasma Mass Spectrometry Procedure (ICP-MS)**



**Pb 1.0 Protocol Objective and Purpose**

The purpose of this protocol is to define the procedures and methods used to analyze lead in calcium containing products. The protocol defines the following requirements: (1) method validation, (2) sample collection & retention, (3) analyses of samples, and (4) Limits. This lead testing protocol defines the procedures, limits and provides experimental confirmation that the data is reliable for the tested products. This protocol shall become effective for purposes of establishing compliance with lead level limits only after all challenges to its contents and validity have been resolved or waived.

The manufacturer shall be responsible for ensuring that all testing of calcium containing products, whether performed by the manufacturer's employees or by independent laboratories, is performed properly. All samples shall be obtained from either the production line or packaged product. Sufficient quantities of product shall be obtained to perform the testing in duplicate at a minimum and to maintain "retain" samples sufficient in quantity for additional investigation. Testing of a given formula of a calcium product shall be deemed to establish the lead level only for that formula of calcium product and formulas of calcium products which share all of the same ingredients (or a subset of the same ingredients but no additional ingredients) in substantially the same ratios as the tested calcium product. Test results for a lot of a calcium product showing compliance on a lot-by-lot basis shall remain valid for purposes of demonstrating compliance for that lot of the calcium product. Test results for a calcium product showing compliance on a product line basis shall remain valid for purposes of demonstrating product line compliance unless there is a material change in the product's formula, manufacturing process or ingredients. For calcium products which are to be shipped on or after July 1, 1997, the manufacturer must test such calcium products pursuant to this protocol by July 1, 1997, or as soon thereafter as is reasonably feasible. Manufacturers may rely on analytical testing which is substantially equivalent (i.e., results within 15%, validation meeting the acceptance criteria for validation of this protocol, and showing no assay bias) to this protocol to demonstrate compliance for calcium products to be shipped on or after July 1, 1997, until testing pursuant to this protocol is completed. For calcium products which are to be shipped on or after April 1, 1999, the manufacturer must test such calcium products pursuant to this protocol by April 1, 1999. In the event of disagreement between testing results produced using a method complying with this protocol and testing results produced using a method which is not substantially equivalent to this protocol, the former shall be preferred.

## **1.1 References**

This lead testing protocol is designed to be used in combination with additional documentation included, but are not limited, to the following:

- a. Instrument manuals.
- b. Instrument Software manuals
- c. Standard Operating Procedures
- d. Calibration Standard Certifications
- e. Computerized System Qualification
- f. Instrument Installation Qualification
- g. Instrument Operational Qualification
- h. Instrument Performance Qualification
- i. Analyst Training Records.
- j. USP 23 Section <1225>, Validation of Compendial Methods, pp. 1982 to 1985, Category II Quantitative assays for impurities in bulk drug substances or degradation products in finished pharmaceutical products."
- k. Federal Register Notice, March 1, 1995, International Conference on Harmonization (ICH), Guideline on Validation of Analytical Procedures: Definitions and Terminology.

## **Pb 2.0 Method Validation Requirements**

As detailed in this section, the method shall be validated within any laboratory scheduled to conduct analyses of calcium containing products prior to conducting analyses intended to demonstrate compliance. Validation of the method shall be repeated when and if significant changes in the laboratory (e.g., replacement of equipment) make reliance on the prior validation inappropriate.

### **2.1 Accuracy**

#### **2.1.1 Definition**

The accuracy of an analytical method expresses the closeness of test results obtained by that method to the true value. Accuracy may often be expressed as percent recovery by the assay of known, added amounts of analyte. Accuracy is a measure of the exactness of the analytical method.

#### **2.1.2 Recovery Studies**

The accuracy of the method should be assessed for the individual formulation tested. The recovery studies should be performed in the range of 0.05 µg/g to 3.00 µg/g (ppm) on the representative finished product sample.

A 0.5 µg/mL lead stock solution should be prepared by diluting 10 mL of 10 ppm lead standard solution with water to a total volume of 200 mL. A minimum of sixteen samples should be prepared from a composite, each having the sample weight defined in the procedure (1 gram). The first four samples are used to obtain the mean lead value (no lead addition). To the remaining samples, add appropriate volumes of the lead stock solution to cover the recovery range of 0.05 µg/g to 3.00µg/g, using a minimum of three concentrations with four samples per concentration level.

The theoretical amounts of lead in each sample is obtained by adding the average value obtained from the samples containing no spiked lead to the amount spiked in each of the three groups. The µg of lead analyzed in each sample is divided by the theoretical calculated µg of lead amount and multiplied by 100 to obtain percent recovery.

#### **2.1.3 Accuracy Acceptance Criteria**

The acceptance criteria for the spiked samples should be within 80% to 120% recovery.

## **2.2 Precision & Ruggedness**

### **2.2.1 Definitions**

1. **Repeatability:** Repeatability expresses the precision under the same operation conditions over a short period of time.
2. **Intermediate Precision:** Intermediate precision expresses within-laboratory variation. Different days (inter-day precision), different analysts, different equipment, different reagents, acids, and standards, etc. (Part of a ruggedness demonstration.)

### **2.2.2 Precision Study (Repeatability)**

Measure a prepared sample solution ten times and calculate the mean, standard deviation, and percent relative standard deviation (coefficient of variation).

### **2.2.3 Precision Study Acceptance Criteria**

The percent relative standard deviation is less than 15%.

### **2.2.4 Ruggedness (Intermediate Precision) Study**

Prepare a composite sample of at least 20 tablets or equivalent as defined in the method. Have two different analysts analyze six samples each from the same composite sample on different days, using different equipment (if possible), reagents, standards, and acids. Calculate the mean, standard deviation, and relative standard deviations separately for the two analysts data.

### **2.2.5 Ruggedness Study Acceptance Criteria**

The relative standard deviations for each of the analysts are less than 25%. The mean values between the two analysts are within 25% relative.

## **2.3 Limit of Detection**

### **2.3.1 Definition**

The limit of detection is a parameter of limit tests. It is the lowest concentration of analyte in a sample that can be detected, but not necessarily quantitated, under the stated experimental conditions. Thus, limit tests merely substantiate that the analyte concentration is above or below a certain level. The limit of detection is usually expressed as the concentration of analyte (e.g. percentage, parts per billion, etc.) in the sample.

### **2.3.2 Instrumental Limit of Detection Study**

Six replicate measurements of the blank solution are made and the standard deviation of the baseline noise is calculated. The standard deviation of the baseline noise is multiplied by 3 to give an estimate of the instrument signal at the limit of detection. The limit of detection is subsequently validated by the analysis of three standards which will provide peak intensities at or near the signal level calculated for the limit of detection.

### **2.3.3 Instrumental Limit of Detection Acceptance Criteria**

The instrumental limit of detection for lead should be 0.0010 ppm ( $\mu\text{g/mL}$ ) or below.

## **2.4 Limit of Quantitation**

### **2.4.1 Definition**

Limit of quantitation is a parameter of quantitative assays for low levels of compounds in sample matrices, such as impurities in bulk drug substances and degradation products in finished pharmaceuticals. It is the lowest concentration analyte in a sample that can be determined with acceptable precision and accuracy under the stated experimental conditions. The limit of quantitation is expressed as the concentration of analyte (e.g. percent, parts per billion, etc.) in the sample.

### **2.4.2 Instrumental Limit of Quantitation Study**

Six replicate measurements of the blank solution are made and the standard deviation of the baseline noise is calculated. The standard deviation of the baseline noise is multiplied by 10 to give an estimate of the instrument signal at the limit of quantitation.

The limit of quantitation is subsequently validated by the analysis of three standards which will provide peak intensities at or near the signal calculated for the limit of quantitation.

### **2.4.3 Instrumental Limit of Quantitation Acceptance Criteria**

The instrumental limit of quantitation for lead should be 0.003 ppm ( $\mu\text{g/mL}$ ) or below.

## **2.5 Linearity and Range**

### **2.5.1 Definitions**

- Linearity:** The linearity of the system is the ability to elicit test results that are directly, or by a well-defined mathematical transformation, proportional to the concentration of analyte in samples within a given range. Linearity is usually expressed in terms of the variance around the slope of the regression line calculated according to an established mathematical relationship from test results obtained by the analysis of samples with varying concentrations of analyte.
- Range:** The range of an analytical method is the interval between the upper and lower levels of analyte (including these levels) that have been demonstrated to be determined with precision, accuracy, and linearity using the same units as test results (e.g. percent, parts per million) obtained by the analytical method.

### **2.5.2 Linearity Study**

Linearity check shall be performed using a minimum of eight different concentrations of a lead (Pb) standard solution and one or more internal standard solutions which will bracket the standard working range (from the limit of detection to 45.0 ppb) of the analysis. The following stock standard solutions may be used in the linearity test: Pb, Ho, Re, Sc, In, Tl, Bi and Tb. If desired, an additional linearity study may be conducted using a calcium containing solution shown to contain a lead solution concentration less than the method detection limit. A linear regression plot and equation is calculated plotting the analyte concentration against response values.

### **2.5.3 Linearity Acceptance Criteria**

The response of the instrument is linear in the concentration range as demonstrated by a correlation coefficient ( $r^2$ ) of 0.98 or better.

### **2.5.4 Range Data**

Range is established for each of the trace lead analysis test being validated by summarizing the accuracy, Linearity, and precision data.

A result is invalid if it is above the validated range of the analytical method. Values below 0.05  $\mu\text{g/g}$  should be reported as numbered estimates. An acceptable range must include all specification limits for a method and expected results which may fall outside the specification level.

### **2.5.5 Range Acceptance Criteria**

The summarized data meets acceptance criteria defined in each section and demonstrates that samples within the concentration range of 0.05  $\mu\text{g/g}$  to 3.0  $\mu\text{g/g}$  (ppm) of lead can be analyzed by the analytical procedure.

**Pb 3.0 ICP-MS Finished Product Sampling and Analytical Methodology**

**3.1 Scope**

This method describes the sampling plan, procedure, data analysis, and limits to be used to analyze calcium containing dosage forms for trace lead.

**Special Notes:**

- ◆ All references in this protocol to the terms "purified water" or "water" shall mean ASTM Type I water.
- ◆ All glassware must be lead free and must be rinsed with 1:1 trace quality nitric acid and purified water, followed by purified water, followed by 1:1 hydrochloric acid and purified water, followed again by purified water.
- ◆ All internal standards must be prepared from the same batch and contain the same amount of internal standard reference material.
- ◆ Special precaution should be taken to avoid contamination.
- ◆ Nitric acid may be substituted for hydrochloric acid if the acceptance criteria for validation of this protocol continue to be met.
- ◆ Sample preparation shall be appropriate for the dosage form being analyzed (e.g., gums which do not lend themselves to composite sample preparation) if the acceptance criteria for validation of this protocol continue to be met.

**3.2 Finished Product Sampling Plan**

**Special Notes:**

- ◆ Sufficient sample of all products tested should be retained to permit additional testing (at least in duplicate).
- ◆ "Random selection" as used herein shall be pursuant to a scientifically and/ or regulatorily acceptable procedure.
  - A. For "Lot-by-Lot" compliance testing pursuant to Section 3.15, the samples used to prepare the composite shall be randomly selected from a given lot.
  - B. For "Product Line" compliance testing pursuant to Section 3.15, one sample shall be randomly selected from each of six different lots representative of the product to be shipped during the time period in question.



### **3.3 Equipment**

- ◆ Inductively Coupled Plasma Mass Spectrometer
- ◆ Analytical Balance
- ◆ Class A volumetric flasks or equivalent
- ◆ Class A Pipets or equivalent
- ◆ Sample grinding equipment
- ◆ Teflon Beakers or equivalent
- ◆ Heating Apparatus: Hot plate or two stage microwave

### **3.4 Reagents**

- ◆ Plasma Grade Lead Standards - NIST Traceable - Certified
- ◆ Purified Water
- ◆ Reference Control Sample: NIST Bone Meal 1486
- ◆ Plasma Grade Internal Standards - NIST Traceable - Certified
- ◆ Trace Analysis grade Acids (Ultrex® or equivalent): Hydrochloric and/or nitric

### **3.5 Preparation of Solutions**

Note: Volumes may be increased proportionally

#### **A. Blank Solution**

Prepare a solution of 1% HNO<sub>3</sub> / 1% HCl in water to be used in diluting standards and samples.

#### **B. Stock Internal Standard Solution**

Prepare a 10 ppm internal standard solution using one or more of the standards listed in section 2.5.2.

#### **C. Lead Stock Solution**

Prepare a 1000 ppb lead stock solution by diluting reference material in 1% HNO<sub>3</sub> / 1% HCl.

#### **D. Rinse Solution Containing 1:1 Trace Quality Nitric Acid and Water**

Carefully add 100 mL of nitric acid to 100 mL of water.

**E. Rinse Solution Containing 1:1 Trace Quality Hydrochloric Acid and Water**

Carefully add 100 mL of hydrochloric acid to 100 mL of water.

**3.6 Preparation of Standards**

**A. Zero Level Standard Solution**

Prepare a zero level standard (blank) with 1% HNO<sub>3</sub> / 1% HCl solution and add the internal standard solution to obtain a level of 20 µl per 10 mL.

**B. Standard Solutions of Lead**

Prepare standard solutions in order to bracket the concentration range of the samples. Matrix match standards and samples with 1% HNO<sub>3</sub> / 1% HCl solution and add the internal standard to obtain a level of 20 µl per 10 mL.

**3.7 Analytical Composite Sample**

Weigh a minimum of 20 tablets (or equivalent) and determine the average tablet (or equivalent) weight. Grind the tablets to a fine, uniform powder. For non-tablet dosage forms, an equivalent sample shall be prepared. Proceed as directed under "Sample Preparation Procedure."

**3.8. Instrument Sample Sequence**

Prepare and analyze all samples in duplicate at a minimum.

**3.9 Sample Preparation Procedure**

- A. Accurately weigh approximately 1.0 gram, or a sample size appropriate to ensure that the result is in the validated range, of the composite sample into a 250 mL teflon beaker (or equivalent).
- B. Add 8 mLs of trace quality concentrated nitric acid to the beaker (enough to wet the sample).

- C. Allow the carbonate (if present) reaction to dissipate and swirl to mix or dissolve.
- D. Cover with a lead-free watch glass (or equivalent).
- E. Heat the sample using a hotplate or other heating technique such as a microwave digestion unit under a fume hood to aid digestion of the sample and, if necessary, reflux without boiling to dryness for a minimum of 10 to 15 minutes and for an additional time period as determined by the recovery studies if necessary to completely digest the sample. If necessary to ensure complete digestion, add an additional 5 mL of trace quality concentrated nitric acid to the sample during refluxing. The need for this additional digestion must be demonstrated during the validation studies. Remove from heat.
- F. If necessary to ensure digestion of organic chemicals in the products that may interfere with the analysis, a hydrogen peroxide reaction step may be added to the procedure. In this case, the product of Step E is further heated without boiling using a ribbed lead free watch glass until the solution evaporates to approximately 5 mL. A covering solution over the bottom of the beaker must be maintained. The sample is cooled and 2 mL of purified water and 3 mL of 30% hydrogen peroxide is added. The beaker is covered with a lead free watch glass and warmed with a hot plate to start the peroxide reaction. Care must be taken to ensure that losses do not occur due to excessively vigorous effervescence. Heat until effervescence subsides and cool the beaker. Continue to add 30% hydrogen peroxide in 1 mL aliquots with warming until the effervescence is minimal or until the general sample appearance is unchanged. Do not add more than a total of 10 mL hydrogen peroxide.
- G. To either the solution from E or F, depending upon whether the hydrogen peroxide reaction step was incorporated, add either 3 mL of trace quality concentrated hydrochloric acid (to the solution from E) or 5 mL of trace quality concentrated hydrochloric acid (to the solution from F). If additional heating and reflux is required, add 10 mL of purified water. Replace the watch glass, and reflux without boiling to dryness. For some products, heating and reflux will not be necessary. In that case, the solution is swirled to mix and the reaction allowed to subside.
- H. Cool by adding about 50 mL of purified water.

- I. Bring sample to a volume of 100 mLs with purified water.
- J. Particulates that might remain in the digestate should be removed by filtration (filter through Whatman No. 41 filter paper or equivalent), centrifugation (2,000 - 3,000 rpm for 10 minutes is usually sufficient) or by allowing the sample to settle.
- K. Dilute sample for ICP-MS with 1% HNO<sub>3</sub> / 1% HCl diluent. If the sample reading is outside the linear range, dilute to bring the sample reading within the linear range, but not below the limit of quantitation.
- L. Add appropriate mLs of internal standard solution to match standards in order to obtain a level of 20 µl per 10 mL of final volume.
- M. For each set of samples processed, preparation blanks should be carried throughout the entire sample preparation and analytical process. These blanks will be useful in determining if samples are being contaminated.

### **3.10. Reference Control Sample Procedure**

- A. Accurately weigh an amount of the reference material which, after dilution, is expected to yield an amount of lead comparable to the amount of lead expected in the calcium finished product sample.
- B. Proceed as directed for steps B through L of Section 3.9.

### **3.11. Instrument Calibration**

Calibrate the instrument in order to bracket the concentration range of the prepared sample solutions. Verify instrument calibration with midrange calibration checks.

### **3.12. Instrument Conditions**

Instrument must pass manufacturer's specifications for resolution and sensitivity. Read all isotopes for lead (206, 207, 208 amu) and report total lead as the sum of all three isotopes. Read sample solution three times and average the intensities.

### **3.13. Quality Control During Analysis**

**Initial QC Checks:** Include a reagent blank, midrange calibration check, second source midrange calibration check, and spike. If all data is acceptable, the run can be accepted.

<b><u>Acceptance Criteria for Initial QC Checks:</u></b>	<b><u>Relative Limits</u></b>
Midrange Calibration Check:	94% to 106%
Second Source Midrange Calibration Check	93% to 107%
Spike	80% to 120%

**Running QC Checks:** There should be a blank sample prep every ten samples, spike sample every ten samples, and a midrange calibration check every ten samples. If all data is acceptable, the data from the run can be reported. If not, a laboratory investigation will need to be conducted and specific corrective action put in place.

<b><u>Acceptance Criteria for Running QC Checks:</u></b>	<b><u>Relative Limits</u></b>
Midrange Calibration Check:	94% to 106%
Spike	80% to 120%

**Reference Sample:** For each run, analyze either a standard reference material or a previously analyzed sample.

Acceptance Criteria for Reference Sample is  $\pm 20\%$  of previous or certified value.

### 3.14 Sample Calculations

#### 1. Micrograms of lead per gram (ppm)

$$\mu\text{g Pb/g} = (C \times \text{DF}) / (\text{g Sample wt} \times 1000).$$

Where:

C	=	Concentration of lead in ppb
DF	=	Dilution Factor in mL
Sample wt	=	sample weight in grams
1000	=	Factor to convert from ppb to ppm

#### 2. Micrograms of lead per unit dose

$$\mu\text{g Pb/unit dose} = (\mu\text{g Pb/g})(\text{g ave. unit dose wt.})$$

Where:

g ave. unit dose wt.	=	Average unit dose weight in grams
$\mu\text{g Pb/g}$	=	ppm sample
$\mu\text{g Pb/unit dose}$	=	micrograms lead per unit dose

3. Micrograms of lead per gram of elemental calcium

$$\mu\text{g Pb/g Ca} = (\mu\text{g Pb per unit dose})/(\text{g Ca per unit dose})$$

Where:

$\mu\text{g Pb per unit dose}$	=	micrograms of lead per unit dose
$\text{Ca per unit dose}$	=	grams of elemental calcium per unit dose
$\mu\text{g Pb/g Ca}$	=	micrograms of lead per gram of elemental calcium

### **3.15 Comparison of Analytical Data to Sample Compliance Limit**

The analytical data can establish that a given calcium product meets a given compliance limit for either: (a) the product line by testing multiple lots of the calcium product, or (b) for individual lots of the product line if six separate lots are not available for analysis, if the results of the analysis of six lots does not establish product line compliance for that calcium product, or if the manufacturer elects to establish compliance on a lot-by-lot rather than product line basis.

#### **A. Product Line Compliance**

Compliance is established for a product line if the results of analyzing six samples selected pursuant to Section 3.2 produces a single-tailed 90% upper confidence limit of the mean lead concentration based on the averages of the replicate analyses, using a Student's t-test or equivalent method, which does not exceed the compliance limit. If the mean does not exceed the compliance limit but the 90% confidence limit does, analysis of additional samples selected pursuant to Section 3.2 may be performed, and compliance established for that product line, if the 90% confidence limit for the entire set of samples does not exceed the compliance limit. If an unusual result (greater than 3 standard deviations from the mean of the other five lots) is obtained for a single lot, then confirmatory testing is required to verify correctness of the initial result. In the event that the unusual result is more than 3 standard deviations from the mean of the other results after confirmatory testing, the unusual result can be disregarded. The basis for such confirmatory testing is to assure that the procedure (particularly sample preparation) was followed correctly.

If product line compliance is not established as of a given point in time, the manufacturer may undertake subsequent testing to establish product line compliance. Unless and until product line compliance is established, or as an alternative to establishing product line compliance, lot-by-lot compliance may be established by the manufacturer.

#### **B. Lot-By-Lot Compliance**

An individual lot demonstrates compliance based on analysis of the composite sample selected pursuant to Section 3.2 if the average of the analytical replicates on that lot does not exceed the compliance limit, and: (a) for the first compliance phase, no individual result may exceed the compliance limit, and (b) for the second compliance phase, no individual result may exceed 120% of the compliance limit. If an individual lot does not demonstrate compliance pursuant to the immediately



preceding sentence, analysis of additional samples selected pursuant to Section 3.2 may be performed, and compliance established for that lot, if the single-tailed 90% upper confidence limit for the entire set of samples does not exceed the compliance limit. If an unusual result (greater than 3 standard deviations from the mean of the other results) is obtained for a single result, then confirmatory testing is required to verify correctness of the initial result. In the event that the unusual result is more than 3 standard deviations from the mean of the other results after confirmatory testing, the unusual result can be disregarded.

**Pb 4.0 Protocol Deviation**

Document any deviations from the protocol with rationale, justification, cause, corrective action, and any significance.

**EXHIBIT B**

**EXHIBIT B**  
**LIST OF CALCIUM SUPPLEMENTS/ANALYSES**

**BAYER CORPORATION**

**Product Name:**

One-A-Day® Calcium Plus  
 Alka-Mints® Spearmint Flavor  
 Alka-Mints® Cherry Flavor  
 Alka-Mints® Assorted Flavors  
 Alka-Mints® Tropical Flavor  
 Alka-Seltzer® Antacid Liquid Gelcaps  
 Alka-Seltzer® Caplets

**Product Identification:**

**CONSAC INDUSTRIES (COUNTRY LIFE)**

**Product Name:**

Cal Snack  
 Cal Snack  
 Target Mins Calcium Caps  
 Target Mins Cal-Mag Caps  
 Target Mins Cal-Mag Caps  
 Target Mins Cal-Mag Complex  
 Target Mins Cal-Mag Complex  
 Target Mins Cal-Mag Potassium  
 Target Mins Cal-Mag Potassium  
 Target Mins Cal-Mag-Zinc  
 Target Mins Cal-Mag-Zinc  
 Target Mins Nerve Osteo Support  
 Nerve Osteo Support  
 Target Mins Total Mins Complex  
 Target Mins Total Mins Complex  
 Target Mins Total Mins Complex  
 Target Mins Total Mins Complex  
 Maxi-Cal  
 Maxi-Cal  
 Cal-Mag Complex  
 Cal-Mag Complex  
 Cal-Mag-Zinc  
 Cal-Mag-Zinc  
 Maxi-Mins Complex  
 Maxi-Mins Complex  
 Maxi Pre-Natal

**Product Identification:**

2463	60
2464	120
2470	90
2476	90
2477	180
2480	90
2481	180
2485	90
2486	180
2490	60
2491	120
2496	90
2497	180
2510	60
2511	120
2513	60
2514	120
2540	90
2541	180
2550	90
2551	180
2601	100
2604	250
2760	90
2761	180
8025	180

**EXHIBIT B**  
**LIST OF CALCIUM SUPPLEMENTS/ANTACIDS**

**JOHNSON & JOHNSON • MERCK  
CONSUMER PHARMACEUTICALS**

**Product Name:**

Mylanta Tablets  
Maximum Strength Mylanta Tablets  
Mylanta Gelcaps Antacid  
Children's Mylanta Upset Stomach Relief

**Product Identification:**

**NUTRILITE, A DIVISION OF AMWAY  
CORPORATION**

**Product Name:**

Antacid Tablets  
Antacid Tablets  
Calcium Magnesium 600 mg  
Calcium Magnesium 600 mg  
Calcium 500 mg with Vitamin D  
Calcium, 600 mg  
Calcium, 600 mg  
Calcium, 600 mg  
Calcium, 600 mg  
Calcium, 600 mg  
Calcium, 600 mg with Vitamin D  
Calcium, 600 mg with Vitamin D  
Calcium, 600 mg with Vitamin D  
Calcium, 600 mg with Vitamin D  
Oyster Shell Calcium, 250 mg  
Oyster Shell Calcium, 250 mg  
Oyster Shell Calcium, 250 mg  
Oyster Shell Calcium, 250 mg

**Product Identification:**

DF-5582  
DF-5525  
NF-3022  
NF-3278  
SF-2390  
SF-2266  
SF-2571  
SF-2625  
SF-2670  
SF-2864  
SF-2391  
SF-2631  
SF-2827  
SF-2867  
SF-2250  
SF-2251  
SF-2252  
SF-2551

NUTRILITE, A DIVISION OF AMWAY  
CORPORATION (Continued)

<u>Product Name:</u>	<u>Product Identification:</u>
Oyster Shell Calcium, 250 mg with with Vitamin D	DF-5578
Oyster Shell Calcium, 250 mg with with Vitamin D	SF-2626
Oyster Shell Calcium, 250 mg with with Vitamin D	SF-2865
Oyster Shell Calcium, 500 mg	SF-2500
Oyster Shell Calcium, 500 mg	SF-2501
Oyster Shell Calcium, 500 mg	SF-2502
Oyster Shell Calcium, 500 mg	SF-2627
Oyster Shell Calcium, 500 mg	SF-2866
Oyster Shell Calcium, 500 mg with Vitamin D	SF-2503
Oyster Shell Calcium, 500 mg with Vitamin D	SF-2504

**EXHIBIT B**

**EXHIBIT B**

**MULTIVITAMIN/MULTIMINERAL PRODUCTS**

Bugs Bunny Complete

Flintstones Complete

Flintstones Plus Calcium

One A Day Essential

One A Day Maximum

One A Day Men's Formula

One A Day 50 Plus

One A Day 55 Plus

One A Day Extra C Formula

One A Day Stressgard Formula

One A Day Within Women's Formula

One A Day Women's