AT TACHMENT 2

Battelle Study Number SC900078
Zoecon Study Number 1538

FINAL REPORT

STUDY TITLE

METHOD DEVELOPMENT AND VALIDATION OF
PROPETAMPHOS RESIDUE ANALYSIS IN FOOD COMMODITIES

DATA REQUIREMENTS

Environmental Protection Agency Guidelines
Subdivision 0, Series 171
Section 171-4 (C)(5)

AUTHORS

Mark G. Schweitzer and Stephen J. Summer

STUDY COMPLETED ON

April 29, 1991

PERFORMED BY

Battelle
505 King Avenue
Columbus, OH 43201-2693

LABORATORY STUDY NUMBER

Battelle Study Number SC900078

SPONSOR

Zoecon Corporation
12200 Denton Drive
Dallas, TX 75234
STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

No claim of data confidentiality is made for any information contained in this study on the basis of its falling within the scope of FIFRA Section 10(d)(1)(A), (B), or (C).

Company: Zoecon Corporation
Company Agent: Kelly J. Parker
Title: Regulatory Specialist
Signature: Kelly J. Parker
Date: 21 August 1991
GOOD LABORATORY PRACTICES STATEMENT

This study was conducted according to the principles of Good Laboratory Practices and is in compliance with the United States Environmental Protection Agency's Federal Insecticide, Fungicide, and Rodenticide Act, Good Laboratory Practice Regulations, 40 CFR Part 160.

Mark G. Schweitzer, Ph.D.
Study Director
1/29/91
Date

SPONSOR CERTIFICATION OF GOOD LABORATORY PRACTICE

To the best of my knowledge, the Good Laboratory Practice Statement signed by the study director is truthful and accurate.

Janet Lephart
Sponsor
6 Mar 91
Date

Kelly J. Parker
Submitter
21 August 1991
Date
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QUALITY ASSURANCE STATEMENT

This study was inspected by the Quality Assurance Unit and reports were submitted to management and the study director as follows:

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N/R = not required.

To the best of my knowledge, the methods described were the methods followed and the data presented accurately represent data generated during the study.

[Signature]
Quality Assurance Unit
Date

Health and Environment Group
Battelle Study Number: SC900078
Zoecon Study Number: 1538

STUDY INFORMATION

BATTELLE STUDY NUMBER: SC900078

STUDY TITLE: Method Development and Validation of Propetamphos Residue Analysis in Food Commodities

TEST MATERIAL: Propetamphos

STUDY DIRECTOR: Mark G. Schweitzer

SPONSOR'S STUDY MONITOR: Janet Lephart

TESTING FACILITY: Battelle
505 King Avenue
Columbus, OH 43201-2693

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12200 Denton Drive
Dallas, TX 75234

INITIATION DATE: October 3, 1990

COMPLETION DATE: April 29, 1991

STUDY PERSONNEL:
Mark G. Schweitzer
Stephen J. Summer
Robert W. Atkinson
STUDY CERTIFICATION STATEMENT

The data presented in this report accurately reflect the data generated during the study.

Mark G. Schweitzer, Ph.D.
Study Director

4/29/91

Date

Study Contact:
Mark G. Schweitzer
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Columbus, Ohio 43201
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SPONSOR CERTIFICATION

This report is an exact, unaltered copy of the report submitted by Battelle.

Sponsor Representative

Date

Submitter

Date
A. ABSTRACT

The purpose of this study was to develop and validate an analytical method for the determination of propetamphos residue in various food commodities. The actual commodities examined were apples, beer, bologna, bread, butter, flour, hamburger, lettuce, macaroni, milk, Rice Krispies®, and sugar. The method is basically two sub-methods; an analysis of propetamphos residue from non-liquid food commodities and propetamphos residue from liquid commodities. The non-liquid food commodities were homogenized in the presence of extraction solvent (either acetonitrile or acetone), filtered, centrifuged, dehydrated, filtered again, and analyzed by gas chromatography with a mass selective detector (GC/MSD). The liquid food commodities were adsorbed directly on an Extrelut column, eluted with hexane, filtered, and analyzed by GC/MSD.

In the validation of the method, untreated samples of each commodity were obtained from a local supermarket, were homogenized, and fortified in triplicate with propetamphos at concentrations of 0.1 and 0.3 ppm. The fortification recoveries are summarized in Table I. All recoveries fell in the range of 70-120% for each commodity. A typical sample set, consisting of two controls and six treated samples, can be completed by an analyst in approximately eight hours.

B. MATERIALS

Test Substance

The test substance was propetamphos (CAS Registry No. 31218-83-4). The propetamphos used in this study (lot number PK024, assay value 91.15%), was a liquid as provided by Zoecon. When not in use, the test substance was stored at approximately -20°C. Documentation of the stability of propetamphos is maintained by Zoecon.
Food Commodities

All of the food commodities were obtained from the Big Bear Supermarket, Fifth Avenue, Columbus, Ohio. Table II provides a summary of the commodities used in the validation study. When not in use, the food commodities were stored at approximately -20°C.

Reagents

1. Acetonitrile, Burdick and Jackson, distilled in glass, UV grade.
2. Acetone, Burdick and Jackson, distilled in glass, UV grade.
3. Hexane, Burdick and Jackson, distilled in glass, UV grade.
4. Anhydrous Sodium Sulfate, Baker, reagent grade.

Glassware

1. Buchner funnels, 76 mm.
2. Volumetric flasks, 500 mL, 200 mL, and 100 mL.
3. Vacuum flasks, 250 mL.
4. Extraction Bottles, Nalgene, wide-mouth, 8 ounce.
5. Glass sample vials, 4 dram and 1 dram, screw cap with teflon liners.
7. 4 oz amber glass bottle with teflon-lined screw cap.

Equipment

1. Finnpipets, Cole-Parmer, 200-1000 μL and 0-200 μL adjustable (or equivalent).
2. Polytron Homogenizer, Brinkman Model PT 10/35 (or equivalent).
3. Sar Vac vacuum pump, Seargent Welch, Model 8803 (or equivalent).
4. Hobart Food Cutter, Model 8186 (or equivalent).
5. IEC Model K Centrifuge (or equivalent).
7. Glass fiber filters, Gelman Type A/E, 76 mm.
8. Disposable polypropylene plastic syringes (Catalog No. 201-640), Sunbrokers, 25 mL.
9. Filter Disks, Gelman Acrodisc, 0.2 micron, 25 mm.

Instrumentation

1. Hewlett Packard 5890 Series II gas chromatograph with splitless injector.
2. Hewlett Packard 7673 autoinjector.
4. Vectra 05/20 computer with VGA monitor and keyboard.
5. Windows 386 and Microsoft Chem Station software package (Revision A.00.00).

C. METHOD

Standard Preparation

**Propetamphos Stock Solution.** The propetamphos reference standard (0.050 g) was accurately weighed into a 1-dram vial. The propetamphos was diluted with 2 mL of hexane and quantitatively transferred using a pasteur pipet to a 500 mL volumetric flask. The 1-dram vial was used three more times with 2 mL portions of hexane; these rinses were added to the 500 mL volumetric flask. The solution was diluted to the mark with hexane. The final concentration was 100 µg/mL.

**Propetamphos Working Stock Solution.** The propetamphos stock solution (10 mL) was pipetted into a 100 mL volumetric flask and brought
up to the mark with hexane. The final concentration was 10 μg/mL or 10,000 ng/mL.

**Propetamphos Standard Solutions.** The appropriate volumes of the propetamphos working stock (10,000 ng/mL) was pipetted into 100 mL volumetric flasks to yield the final concentrations of 1, 5, 10, 25, 50, and 100 ng/mL. The following table shows the volumes to be used. The volumetrics were diluted to the mark with hexane.

<table>
<thead>
<tr>
<th>mL of Working Stock</th>
<th>mL Diluted to</th>
<th>Solvent</th>
<th>Final Concentration</th>
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<td>1.000</td>
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<td>Hexane</td>
<td>100 ng/mL</td>
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<td>50 ng/mL</td>
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<td>0.250</td>
<td>100</td>
<td>Hexane</td>
<td>25 ng/mL</td>
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<tr>
<td>0.100</td>
<td>100</td>
<td>Hexane</td>
<td>10 ng/mL</td>
</tr>
<tr>
<td>0.050</td>
<td>100</td>
<td>Hexane</td>
<td>5 ng/mL</td>
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<tr>
<td>0.010</td>
<td>100</td>
<td>Hexane</td>
<td>1 ng/mL</td>
</tr>
</tbody>
</table>

**Fortification Procedure**

Method recovery fortifications were prepared by adding an aliquot of a propetamphos stock solution to each sample matrix. Each 25 g solid sample (20 g liquid sample) was fortified with a stock solution of propetamphos in hexane. The stock solution used to fortify the samples was the propetamphos stock solution (100 μg/mL in hexane). For each sample, an appropriate aliquot of the stock solution was added to the pre-weighed sample using a calibrated automatic pipet. The sample was fortified immediately prior to extraction by evenly distributing the stock solution over the surface of the sample.
Sample Preparation For Non-Liquid Commodities

**Homogenization.** The entire sample matrix was homogenized with dry ice using a Hobart food cutter. The homogenized sample matrix was then placed into plastic bags which were loosely tied to allow CO₂ sublimation in the freezer.

**Extraction Procedure.** A 25-gram portion of the homogenized sample matrix was quantitatively weighed into a Nalgene, 8-ounce, wide-mouth bottle. For most non-liquid commodities, 60 mL of acetonitrile was added to the extraction bottle and the sample was homogenized with a Polytron for 1 minute. For foods high in sugar, such as sugar itself or Rice Krispies®, 60 mL of acetone was used as the extraction solvent. The extraction bottle was capped and centrifuged for 20 minutes at a speed control setting of 45 to 50 (approximately 3,000 xg). The extract was decanted into a Buchner funnel which had a 76 mm glass fiber filter in place. Using vacuum, the extract was filtered into a 250 mL vacuum flask. An additional 60 mL of acetonitrile (or acetone when appropriate) was added to the extraction bottle and re-extracted, centrifuged, and decanted. This procedure was repeated a third time and all three 60 mL portions were combined in the vacuum flask. The glass fiber filter was rinsed with a small portion of acetonitrile (or acetone when appropriate) into the vacuum flask. The entire extract from the vacuum flask was poured into a 200 mL volumetric flask and diluted to the mark with acetonitrile (or acetone when appropriate). The sample was returned to the original vacuum flask to which had been added ~10 grams of anhydrous sodium sulfate. A 10-20 mL aliquot of this dried sample was removed from the vacuum flask and filtered into a 4-dram vial, using a 0.2 μm syringe filter attached to a 25 mL solvent resistant plastic syringe. The samples were stored in the freezer at approximately -20°C until analyzed.
Sample Preparation For Liquid Commodities

Extraction Procedure. To ensure a homogenous sample, the liquid was shaken and a 20-gram portion of the sample was weighed into a Nalgene, 8-ounce, wide-mouth bottle. The sample was quantitatively transferred onto a dry Extrelut column and absorbed onto the column packing. The Extrelut column was allowed to dry for 30 minutes. The sample was eluted from the column directly into a 200 mL volumetric flask with two, 100 mL portions of hexane. A portion of the hexane was first added to the wide-mouth bottle to ensure quantitative removal of the sample. The hexane washings were added to the Extrelut column. The volumetric flask was diluted to the mark with hexane. A 10-20 mL aliquot of this sample was removed from the volumetric flask and filtered into a 4-dram vial using a 0.2 μm syringe filter attached to a 25 mL solvent resistant plastic syringe. Samples were stored in the freezer at approximately -20°C until time for analysis by gas chromatography.

Analysis

. Chromatographic Analysis

Gas Chromatography Parameters

GC Column: DB-5, 30 m x 0.25 mm capillary column, 0.10 μm film thickness (J&W Scientific, Folsom, California)

GC Detector: Mass selective detector, SIM run monitoring m/z 138 as the major ion and m/z 194 as the qualifier ion.

Temperature Program: Initial Temperature = 60°C
Initial Time = 1.0 minutes
Rate = 20°C/minutes
Final Temperature = 280°C
Final Time = 8.0 minutes
Run Time = 20 minutes
Detector Temperature: 280°C
Injector Temperature: 250°C
Injector Mode: Splitless injector (Grob)
Purge: on at 0.75 minutes
Liner: Splitless Silica for HP7673 Injection
Gas Flows: Carrier gas (He): 60 cm/sec
Column Head Pressure: 5.5 psi
Retention Time: Carrier flows should be optimized for the instrument and should achieve a relative retention time of 10 minutes for the compound of interest.
Injection Volume: 2 μL

Chromatographic Analysis Procedure. The GC system was conditioned with triplicate injections of the matrix blank extracts prior to the analysis of each commodity to stabilize the system so that the propetamphos response remained constant. The calibration standards were injected in duplicate followed by the matrix extracts in duplicate. Quality control standards were injected no later than after every fifth sample to ensure chromatographic integrity. Calibration curves were run with each new matrix on each day of analysis.

Calculations. A calibration curve was constructed by plotting the peak area versus the actual propetamphos concentration for each standard. The concentration of propetamphos in the sample was calculated using the following equations:
Propetamphos conc., $\mu$g/g = \left( \frac{\text{Peak Area}}{\text{Final Volume}} \right) \frac{\text{Initial Sample Weight, g}}{M}

where $M$ is the slope of the regression line produced from a linear regression analysis of the peak area versus propetamphos concentration. The regression analysis was constrained through the origin. LOTUS 1-2-3 (v. 2.2) was used to prepare data summaries.

Sample Identification

All samples were labelled with the Battelle study number, laboratory record book identification code, fortification level, date of preparation, and the analyst's initials.

D. VALIDATION RESULTS

Propetamphos was fortified into each of the homogenized food commodities at two levels, 0.1 and 0.3 ppm. The mean recoveries of all food matrices were within the 70-120% range with relative standard deviations $\leq$15% as shown in Table 1. The use of a mass selective detector provided excellent sensitivity and specificity. No interferences were observed in any commodity, with the exception of Rice Krispies®. Rice Krispies® showed a low level interference with a measured concentration of approximately 0.02 ppm. All other control samples contained no detectable residues of propetamphos at a method sensitivity of 0.01 ppm. Sample chromatograms and detailed analytical data for each commodity can be found in the Appendices.

The method sensitivity was calculated based on the lowest detectable standard. The lowest detectable standard had a propetamphos concentration of 1 ng/mL. Assuming a sample size of 25 g, and a final
extract volume of 200 mL, the lowest detectable concentration (LDC) of propetamphos is calculated using the equation shown below:

\[
LDC = \frac{(\text{Lowest Detectable Standard})(\text{Final Volume})}{(\text{Sample Weight})}
\]

\[
LDC = \frac{(1 \text{ ng/mL})(200 \text{ mL})}{25 \text{ g}}
\]

\[
= \frac{8 \text{ ng}}{g} = 0.008 \mu g/g = 0.008 \text{ ppm}
\]

E. CONCLUSIONS

The analytical method developed and validated in this study is a simple and accurate method for the analysis of propetamphos in food commodities. The use of a mass selective detector provided exceptional selectivity and sensitivity.

F. RECOMMENDATIONS

During the course of the study, it was determined that the use of the following recommendations prevent erosion in the method sensitivity:

1. Because this method has no "clean-up" procedures, it is recommended that the MSD source be placed on a routine maintenance and cleaning program after a total of approximately 100 sample injections.
2. As part of the routine maintenance of the source, the injector liner should be changed as well as the removal of the first 1-2 inches of the capillary column.

3. The use of ethylacetate should be avoided as it causes significant deterioration of the detector sensitivity.

4. A modified splitless injector liner (silica containing a glass wool plug) should be used with an autosampler.

5. All glassware used during the study, with the exception of the volumetric glassware should be dried/conditioned in a muffle oven prior to use. This eliminates the potential of carry over from sample to sample.

6. Whenever possible, the supplies such as reagents and instrumentation listed in this method (or their equivalent) should be used for this analysis.

6. ARCHIVE STATEMENT

Certified copies of the raw data will be forwarded to Zoecon on completion of the study. The final report, protocol, amendments, and deviations will be archived at Battelle and Zoecon according to their respective standard operating procedures. Battelle will maintain, but not forward the following information: personnel files, standard operating procedures, instrument log books, and any other data relative to this study.
TABLE I. SUMMARY OF FORTIFICATION RECOVERIES

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<td>82.3</td>
</tr>
<tr>
<td></td>
<td>100.3</td>
<td></td>
<td></td>
<td>85.0</td>
</tr>
<tr>
<td></td>
<td>102.0</td>
<td></td>
<td></td>
<td>81.4</td>
</tr>
<tr>
<td>Lettuce</td>
<td>100.8</td>
<td>89.4</td>
<td>11.1</td>
<td>95.5</td>
</tr>
<tr>
<td></td>
<td>82.8</td>
<td></td>
<td></td>
<td>93.3</td>
</tr>
<tr>
<td></td>
<td>84.5</td>
<td></td>
<td></td>
<td>92.3</td>
</tr>
</tbody>
</table>

1 RSD = Relative standard deviation.
TABLE I. SUMMARY OF FORTIFICATION RECOVERIES (CONTINUED)

<table>
<thead>
<tr>
<th>Commodity</th>
<th>0.1 ppm</th>
<th></th>
<th></th>
<th>0.3 ppm</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individual Recoveries, %</td>
<td>Mean Recovery, %</td>
<td>RSD, %</td>
<td>Individual Recoveries, %</td>
<td>Mean Recovery, %</td>
<td>RSD, %</td>
</tr>
<tr>
<td>Macaroni</td>
<td>77.4</td>
<td>76.3</td>
<td>6.9</td>
<td>69.8</td>
<td>73.1</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td>70.5</td>
<td></td>
<td></td>
<td>73.1</td>
<td>76.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>80.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>98.9</td>
<td>106.2</td>
<td>6.3</td>
<td>106.2</td>
<td>109.0</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>112.0</td>
<td></td>
<td></td>
<td>108.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>107.8</td>
<td></td>
<td></td>
<td>112.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice Krispies²</td>
<td>94.0</td>
<td>105.1</td>
<td>9.2</td>
<td>116.1</td>
<td>117.4</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>112.1</td>
<td></td>
<td></td>
<td>110.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>109.0</td>
<td></td>
<td></td>
<td>125.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar</td>
<td>77.2</td>
<td>85.8</td>
<td>10.0</td>
<td>80.5</td>
<td>85.3</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>86.0</td>
<td></td>
<td></td>
<td>85.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>94.3</td>
<td></td>
<td></td>
<td>90.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 RSD = Relative standard deviation.

2 Recoveries for Rice Krispies were corrected for the matrix blank. Correction to all other food matrices were not needed.
### TABLE II. FOOD COMMODITY SUPPLIERS

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Supplier/Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>(Red Delicious)</td>
</tr>
<tr>
<td>Beer</td>
<td>Anheuser-Busch (Bud Dry)</td>
</tr>
<tr>
<td>Bologna</td>
<td>Eckrich (All Beef)</td>
</tr>
<tr>
<td>White Bread</td>
<td>Wonder</td>
</tr>
<tr>
<td>Butter</td>
<td>Land-O-Lakes</td>
</tr>
<tr>
<td>Flour</td>
<td>Gold Medal</td>
</tr>
<tr>
<td>Hamburger</td>
<td>Big Bear (not less than 70% lean)</td>
</tr>
<tr>
<td>Lettuce</td>
<td>Top Fresh (Iceberg)</td>
</tr>
<tr>
<td>Macaroni</td>
<td>Meuller's (elbow macaroni)</td>
</tr>
<tr>
<td>Milk</td>
<td>Meyer Dairy (0.5% fat)</td>
</tr>
<tr>
<td>Rice Krispies</td>
<td>Kellogg's</td>
</tr>
<tr>
<td>Sugar</td>
<td>Domino</td>
</tr>
</tbody>
</table>

1 All commodities were purchased at the Big Bear Supermarket, Fifth Avenue, Columbus, Ohio.
APPENDIX 1

DETAILED ANALYTICAL DATA - APPLES
### Calibration Standards

<table>
<thead>
<tr>
<th>Sample</th>
<th>Lab Number</th>
<th>Peak</th>
<th>Area</th>
<th>Conc.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 KGL</td>
<td>1102</td>
<td>456</td>
<td>549</td>
<td>0.94E+02</td>
<td>1.164768</td>
</tr>
<tr>
<td>1 KGL</td>
<td>103</td>
<td>662</td>
<td>1.43E+02</td>
<td>41.99251</td>
<td></td>
</tr>
<tr>
<td>5 KGL</td>
<td>104</td>
<td>2302</td>
<td>2317</td>
<td>5.06E+02</td>
<td>0.142583</td>
</tr>
<tr>
<td>5 KGL</td>
<td>105</td>
<td>2332</td>
<td>5.07E+02</td>
<td>1.447574</td>
<td></td>
</tr>
<tr>
<td>10 KGL</td>
<td>106</td>
<td>401</td>
<td>4902</td>
<td>8.59E+02</td>
<td>10.79324</td>
</tr>
<tr>
<td>10 KGL</td>
<td>107</td>
<td>4083</td>
<td>8.81E+02</td>
<td>11.18986</td>
<td></td>
</tr>
<tr>
<td>25 KGL</td>
<td>108</td>
<td>5797</td>
<td>1.21E+03</td>
<td>14.76141</td>
<td></td>
</tr>
<tr>
<td>25 KGL</td>
<td>109</td>
<td>10037</td>
<td>4.12E+03</td>
<td>12.87110</td>
<td></td>
</tr>
<tr>
<td>50 KGL</td>
<td>110</td>
<td>22710</td>
<td>22146</td>
<td>4.81E+04</td>
<td>1.208072</td>
</tr>
<tr>
<td>50 KGL</td>
<td>111</td>
<td>11552</td>
<td>4.84E+04</td>
<td>4.113142</td>
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</tr>
<tr>
<td>100 KGL</td>
<td>112</td>
<td>46318</td>
<td>46318</td>
<td>99.06790</td>
<td>6.752305</td>
</tr>
<tr>
<td>100 KGL</td>
<td>113</td>
<td>46158</td>
<td>104.7454</td>
<td>4.745406</td>
<td></td>
</tr>
</tbody>
</table>

**Average Deviation:** 6.42E+02

**Regression Output:**
- Constant: 5
- Std Err of Y Est: 1.04E+02
- R Squared: 0.999124
- No. of Observations: 10
- Degrees of Freedom: 10
- X Coefficients: 4.55E+08
- Std Err of X Est: 6.99E+08

The calculated concentration of propenthofos in the samples is determined by the following equation:

\[
\text{PROPENTHOFOS CONC. TO KGL} = (\text{PEAK AREA} \times \text{COEFFICIENT}) \times \text{MULTIPLIER}
\]

**MULTIPLIER:** 0.401 for standards, 0.001 for sample extracts

Where the coefficient is determined by performing linear regression on the actual standard concentration and the observed peak area. The linear regression is constrained through the origin.
**DATA SUMMARY PAGE 2 OF 2**

**SC900078**

**INITIALS:**  
**DATE:**  
**MATRIX:** APPLES

<table>
<thead>
<tr>
<th>SAMPLE</th>
<th>LBS NUMBER</th>
<th>PEAK</th>
<th>CONC.</th>
<th>CONC.</th>
<th>PERCENT</th>
<th>PERCENT</th>
<th>AVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION</td>
<td>AREA US/G</td>
<td>US/G</td>
<td>RECOVERY</td>
<td>RECOVERY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 K.G./LM  STD.</td>
<td>4114</td>
<td>23561</td>
<td>0.047767</td>
<td>0.10</td>
<td>95.53559</td>
<td>65.21693</td>
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<tr>
<td>50 K.G./LM  STD.</td>
<td>4115</td>
<td>19162</td>
<td>0.041549</td>
<td>0.05</td>
<td>83.09526</td>
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<td></td>
</tr>
<tr>
<td>SOLVENT BLANK</td>
<td>4015</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOLVENT BLANK</td>
<td>4015</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>NA</td>
<td></td>
<td></td>
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<tr>
<td>MATRIX BLANK</td>
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<td>0</td>
<td>0</td>
<td>NA</td>
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<tr>
<td>MATRIX BLANK</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>4008</td>
<td>4045</td>
<td>0.070456</td>
<td>0.10</td>
<td>70.45647</td>
<td>77.49526</td>
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</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>4008</td>
<td>4681</td>
<td>0.084534</td>
<td>0.13</td>
<td>84.53406</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>4009</td>
<td>4007</td>
<td>0.070901</td>
<td>0.13</td>
<td>70.94369</td>
<td>68.67287</td>
<td></td>
</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>4009</td>
<td>3516</td>
<td>0.066402</td>
<td>0.11</td>
<td>66.40204</td>
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</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>4010</td>
<td>4039</td>
<td>0.070062</td>
<td>0.12</td>
<td>70.28246</td>
<td>65.43241</td>
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</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>4010</td>
<td>3933</td>
<td>0.068542</td>
<td>0.10</td>
<td>68.54236</td>
<td></td>
<td></td>
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<tr>
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<td>4011</td>
<td>12349</td>
<td>0.214884</td>
<td>0.30</td>
<td>71.26813</td>
<td>72.25127</td>
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<tr>
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<td>12578</td>
<td>0.218869</td>
<td>0.30</td>
<td>72.95540</td>
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<td></td>
</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>4012</td>
<td>14463</td>
<td>0.251070</td>
<td>0.30</td>
<td>83.58006</td>
<td>55.54181</td>
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</tr>
<tr>
<td>0.1 PPM SPIKE</td>
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<td>15132</td>
<td>0.261360</td>
<td>0.30</td>
<td>87.79362</td>
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</tr>
<tr>
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<td>4013</td>
<td>15721</td>
<td>0.238852</td>
<td>0.30</td>
<td>75.63616</td>
<td>71.52944</td>
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</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>4013</td>
<td>11375</td>
<td>0.201426</td>
<td>0.30</td>
<td>67.13588</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REMARKS:**

K3 = NOT APPLICABLE

**EXPECTED CONCENTRATION** = ([CONTAMINATION LEVEL] x [SAMPLE WT.] / [FINAL VOLUME])

**SUMMARY OF RESULTS:**

<table>
<thead>
<tr>
<th>RELATIVE STANDARD DEVIATION</th>
<th>RELATIVE DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 PPM SPIKE</td>
<td>1.6</td>
</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>0.5</td>
</tr>
</tbody>
</table>

* RELATIVE STANDARD DEVIATION = STANDARD DEVIATION / AVERAGE X 100
PROPETAMPHOS (SC900078)
Calibration Last Updated: Sun Mar 24 00:20:25 1991
External Standard

Reference Window: 5 Percent
Non-Reference Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 1
Default Sample Amount: 0

Compound Information

*** Compound 1 ***

Name: PROPETAMPHOS ( )

<table>
<thead>
<tr>
<th>Signal</th>
<th>Rel Resp</th>
<th>Pct. Unc.(rel)</th>
<th>Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tgt 138</td>
<td></td>
<td></td>
<td>PROPET1.E</td>
</tr>
<tr>
<td>Q1 194</td>
<td>0</td>
<td>20</td>
<td>PROPET1.E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LvL ID</th>
<th>Amt (UG/G)</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>549</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>2317</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>4092</td>
</tr>
<tr>
<td>25</td>
<td>25</td>
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<td>50</td>
<td>28238</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td>60049</td>
</tr>
</tbody>
</table>

Qualifier Peak Analysis ON
Curve Fit: Linear, Forced Through Origin
PROPETAMPHOS (SC900078)

Calibration Last Updated: Sun Mar 24 02:33:02 1991
External Standard Report - DETAILED

Information from Data File:
File: D:\CHEMPC\DATA\APPLE\1701019.D
Operator: STEVE SUMMER
Date Acquired: 24 Mar 91 3:58 am
Method File Name: PROPET1.M
Sample Name: APPLE BLANK EXT #45547-40-14
Misc Info: SC900078
Bottle Number: 17

Report Style:
Graphics: (On) Off
Compounds: (All) Single

Quantitation Settings:
Reference Peak Window: 5 Percent
Non-Reference Peak Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 0.008
Default Sample Amount: 0
Peak Type decoding: * --> Time Reference Peak

Number of Compounds in Database: 1

Time Reference Peaks:

<table>
<thead>
<tr>
<th>#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>
PROPETAMPHOS (SC900078)

File: D:\CHEMPC\DATA\APPLE\1701019.D
Operator: STEVE SUMMER
Date Acquired: 24 Mar 91 3:58 am
Method File Name: PROPET1.M
Sample Name: APPLE BLANK EXT #45547-40-14
Misc Info: SC900078
Bottle Number: 17

Compound: PROPETAMPHOS
Ret Time:
Amount:
Pk # and Type: 1
***** NOT FOUND ****
Abundance

<table>
<thead>
<tr>
<th>Time</th>
<th>0</th>
<th>6.00</th>
<th>7.00</th>
<th>8.00</th>
<th>9.00</th>
<th>10.00</th>
<th>11.00</th>
<th>12.00</th>
<th>13.00</th>
<th>14.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ion 138.00:</td>
<td>700</td>
<td>600</td>
<td>500</td>
<td>400</td>
<td>300</td>
<td>200</td>
<td>100</td>
<td>0</td>
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<td>0</td>
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</tbody>
</table>

Propetamphos
PROPETAMPHOS (SC900078)

Calibration Last Updated: Sun Mar 24 02:33:02 1991
External Standard Report - DETAILED

Information from Data File:
File: D:\CHEMPC\DATA\APPLE\1901021.D
Operator: STEVE SUMMER
Date Acquired: 24 Mar 91 4:51 am
Method File Name: PROPET1.M
Sample Name: 0.1 PPM APPLE SPIKE EXT #45547-40-08
Misc Info: SC900078
Bottle Number: 19

Report Style:
Graphics: (On) Off
Compounds: (All) Single

Quantitation Settings:
Reference Peak Window: 5 Percent
Non-Reference Peak Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 0.008
Default Sample Amount: 0
Peak Type decoding: * -> Time Reference Peak

Number of Compounds in Database: 1

Time Reference Peaks:

<table>
<thead>
<tr>
<th>Pk#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>

Page 31 of 154
PROPETAMPHOS (SC900078) Battelle Study Number SC900078 Zoecon Study Number 1538

File: D:\CHEMP\DATA\APPLE\1901021.D
Operator: STEVE SUMMER
Date Acquired: 24 Mar 91 4:51 am
Method File Name: PROPET1.M
Sample Name: 0.1 PPM APPLE SPIKE EXT #45547-40-08
Misc Info: SC900078
Bottle Number: 19

Compound: PROPETAMPHOS
Ret Time: 9.49
Amount: 0.08 UG/G
Pk # and Type: 1
# Qualifiers Not Satisfied

Signal Ratios Limits RT Limits Area Integ Type
Tgt 136 100.0% 9.49 9.24 4681 PROPET
Q1 194 86.0 9.49 to 4199 PROPET
Q2 0 0.0-0.0
Q3 0

PROPETAMPHOS
CALIBRATION CURVE -- APPLE MATRIX

Response

CALIBRATION CURVE -- APPLE MATRIX

Response = 4.60e-002 * Amt
Corr Coef = 0.998 Curve Fit: Linear/Origin

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APPENDIX 2

DETAILED ANALYTICAL DATA - BEER
**Battelle Study Number SC900078**  
**Zoecon Study Number 1538**

**DATA SUMMARY PAGE 1 OF 2**

**LOTUS 123 V 2.2**

**ANALYST: S.J. SUMMER**

**INITIALS: DATE:**

**MATRIX: BEER**

**ANALYSIS DATE: MARCH 4, 1991**  
**STD CURVE ID #: 030491**

### CALIBRATION STANDARDS

<table>
<thead>
<tr>
<th>SAMPLE DESCRIPTION</th>
<th>LBL NUMBER</th>
<th>PEAK AREA</th>
<th>CONC.</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0E02</td>
<td>429</td>
<td>0.0</td>
<td>0.7625659 23.74142</td>
</tr>
<tr>
<td></td>
<td>0E03</td>
<td>429</td>
<td>0.0</td>
<td>0.7625659 23.74142</td>
</tr>
<tr>
<td>5 KG/ML</td>
<td>0E04</td>
<td>2290</td>
<td>1836</td>
<td>4.07070E+0 18.58598</td>
</tr>
<tr>
<td>5 KG/ML</td>
<td>0E05</td>
<td>1352</td>
<td>2.458461 50.85737</td>
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</tr>
<tr>
<td>10 KG/ML</td>
<td>0E06</td>
<td>6726</td>
<td>4716</td>
<td>6.40893E+0 15.99569</td>
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<tr>
<td>10 KG/ML</td>
<td>0E07</td>
<td>4850</td>
<td>8.583501 14.14298</td>
<td></td>
</tr>
<tr>
<td>25 KG/ML</td>
<td>0E08</td>
<td>12573</td>
<td>24154</td>
<td>22.93612 1.206483</td>
</tr>
<tr>
<td>25 KG/ML</td>
<td>0E09</td>
<td>12573</td>
<td>21.34007 15.85972</td>
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</tr>
<tr>
<td>50 KG/ML</td>
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<td>27638</td>
<td>25502</td>
<td>55.22524 1.742942</td>
</tr>
<tr>
<td>50 KG/ML</td>
<td>0E11</td>
<td>24156</td>
<td>26.95741 14.08563</td>
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<td>100 KG/ML</td>
<td>0E12</td>
<td>56494</td>
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<tr>
<td>100 KG/ML</td>
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<td>59258</td>
<td>105.4453 5.443932</td>
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</table>

**AVERAGE DEVIATION: 15.9612**

### Regression Output:

- Constant: 1
- Std Err of Y Est: 1771.132
- R Squared: 0.997301
- No. of Observations: 11
- Degrees of Freedom: 10

**X Coefficient b =** 501.0367  
**Std Err of Coef.: 10.11881**

The calculated concentration of Propetamphos in the samples is determined by the following equation:

**CONC. (MG/ML) = PEAK AREA / X-COEFFICIENT * MULTIPLIER**

**MULTIPLIER =** 1.000 FOR QC STANDARD  
**1.000 FOR SAMPLE EXTRACT**

Where the X-COEFFICIENT is determined by performing linear regression on the actual standard concentration and the observed peak area. The linear regression is constrained through the origin.
### Battelle Study Number SC900078
Zoecon Study Number 1538

#### DATA SUMMARY PAGE 2 OF 2

<table>
<thead>
<tr>
<th>SAMPLE DESCRIPTION</th>
<th>LAB NUMBER</th>
<th>PEAK CONC.</th>
<th>AREA ug/g</th>
<th>CONC.</th>
<th>PERCENT</th>
<th>PERCENT AVERAGE</th>
<th>RECOVERY</th>
<th>RECOVERY</th>
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<td>26391</td>
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<td>NA</td>
</tr>
<tr>
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<td>0</td>
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<td>0</td>
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<td>NA</td>
<td>NA</td>
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<td>0</td>
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<td>NA</td>
<td>NA</td>
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<td>0</td>
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<tr>
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<td>46566</td>
<td>0.082409</td>
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**KA = NOT APPLICABLE**

**EXPECTED CONCENTRATION = (FORTIFICATION LEVEL, ug/g)(SAMPLE WT.)/(FINAL VOLUME)**

### SUMMARY OF RESULTS:

<table>
<thead>
<tr>
<th>RELATIVE STANDARD DEVIATION</th>
<th>RELATIVE STANDARD DEVIATION</th>
<th>RELATIVE STANDARD DEVIATION</th>
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<td>AVERAGE/STANDARD RECOVERY</td>
<td>DEVIATION</td>
<td>AVERAGE/STANDARD RECOVERY</td>
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<td>0.1</td>
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<tr>
<td>0.5 ppm SPIKE</td>
<td>0.5</td>
<td>0.5</td>
</tr>
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**RELATIVE STANDARD DEVIATION = STANDARD DEVIATION/AVERAGE X 100**
Sequence Calibration Sample
File: D:\CHEMPC\DATA\BEER\0901011.D
Operator: STEVE SUMMER
Date Acquired: 4 Mar 91 8:28 pm
Method File Name: PROPET1.M
Sample Name: CAL STD 25 NG/ML EXT #45547-08-09
Misc Info: SC900078
Bottle Number: 9

PROPETAMPHOS (SC900078)
Calibration Last Updated: Tue Mar 05 08:37:58 1991
External Standard

Reference Window: 5 Percent
Non-Reference Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 1
Default Sample Amount: 0

Compound Information

*** Compound 1 ***

Name: PROPETAMPHOS ( )
Ret. Time 9.55 min., Extract & Integrate from 9.45 to 9.65 min.

<table>
<thead>
<tr>
<th>Signal</th>
<th>Rel Resp</th>
<th>Pct. Unc.(rel)</th>
<th>Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tgt 138</td>
<td>0</td>
<td>20</td>
<td>PROPET1.E</td>
</tr>
<tr>
<td>Q1 194</td>
<td></td>
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<td>PROPET1.E</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Lvl ID</th>
<th>Amt (UG/G)</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1</td>
<td>429</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>1836</td>
</tr>
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<td>10</td>
<td>10</td>
<td>4778</td>
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<tr>
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<td>50</td>
<td>26258</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td>57942</td>
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</tbody>
</table>

Qualifier Peak Analysis ON
Curve Fit: Linear, Forced Through Origin
File: C:\CHEMPC\DATA\BEER\0901011.D
Operator: STEVE SUMMER
Date Acquired: 4 Mar 91 8:28 pm
Method File Name: PROPET1.M
Sample Name: CAL STD 25 NG/ML EXT #45547-08-09
Misc Info: SC900078
Bottle Number: 9

Abundance

Time --> 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00

Ion 138.00: 0901011.D

PROPETAMPHOS

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PROPETAMPHOS (SC900076)

Calibration Last Updated: Tue Mar 05 08:40:55 1991
External Standard Report - DETAILED

Information from Data File:
File: D:\CHEMPC\DATA\BEER\1701019.D
Operator: STEVE SUMMER
Date Acquired: 4 Mar 91 11:55 pm
Method File Name: PROPET1.M
Sample Name: BEER BLANK EXT #45547-06-14
Misc Info: SC900076
Bottle Number: 17

Report Style:
Graphics: (On) Off
Compounds: (All) Single

Quantitation Settings:
Reference Peak Window: 5 Percent
Non-Reference Peak Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 0.01
Default Sample Amount: 0
Peak Type decoding: * -> Time Reference Peak

Number of Compounds in Database: 1

Time Reference Peaks:

<table>
<thead>
<tr>
<th>PK#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>

Page 39 of 154
PROPETAMPHOS (SC900078)

File: D:\CHEMPC\DATA\BEER\1701019.D
Operator: STEVE SUMMER
Date Acquired: 4 Mar 91 11:55 pm
Method File Name: PROPET1.M
Sample Name: BEER BLANK EXT #45547-06-14
Misc Info: SC900078
Bottle Number: 17

Compound: PROPETAMPHOS
Ret Time: 
Amount: 
Pk # and Type: 1

***** NOT FOUND ****
File: C:\CHEMPC\DATA\BEER\1701019.D
Operator: STEVE SUMMER
Date Acquired: 4 Mar 91 11:55 pm
Method File Name: PROPET1.M
Sample Name: BEER BLANK EXT #45547-06-14
Misc Info: SC900078
Bottle Number: 17

Abundance Ion 138.00: 1701019.D

PROPETAMPHOS

Time -> 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00
PROPETAMPHALOS (SC900078)

Calibration Last Updated: Tue Mar 05 08:40:55 1991
External Standard Report - DETAILED

Information from Data File:
File: D:\CHEMPC\DATA\BEER\1901021.D
Operator: STEVE SUMMER
Date Acquired: 5 Mar 91 0:47 am
Method File Name: PROPET1.M
Sample Name: 0.1 PPM BEER SPIKE EXT #45547-06-08
Misc Info: SC900078
Bottle Number: 19

Report Style:
Graphics: (On) Off
Compounds: (All) Single

Quantitation Settings:
Reference Peak Window: 5 Percent
Non-Reference Peak Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 0.01
Default Sample Amount: 0
Peak Type decoding: * -> Time Reference Peak

Number of Compounds in Database: 1

Time Reference Peaks:

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<tr>
<th>PK#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>

Page 42 of 54
PROPETAMPHOS (SC900078)

File: D:\CHEMPC\DATA\BEER\1901021.D
Operator: STEVE SUMMER
Date Acquired: 5 Mar 91 0:47 am
Method File Name: PROPET1.M
Sample Name: 0.1 PPM BEER SPIKE EXT #45547-06-08
Misc Info: SC900078
Bottle Number: 19

Compound: PROPETAMPHOS
Ret Time: 9.54
Amount: 0.09 UG/G
Pk # and Type: 1
# Qualifiers Not Satisfied

Signal Ratios | Limits | RT Limits | Area | Integ Type
--- | --- | --- | --- | ---
Tgt | 138 | 100.0% | 9.54 | 9.31 | 4968 | PROPET1
Q1 | 194 | 42.0 | 0.0-0.0 | to | 2086 | PROPET1
Q2 | 0 | | | 9.79 | | |
Q3 | 0 | | | | | |

PROPETAMPHOS
CALIBRATION CURVE -- BEER MATRIX

Response = 5.63e-002 * Amt
Corr Coef = 0.997 Curve Fit: Linear/Origin

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APPENDIX 3

DETAILED ANALYTICAL DATA - BOLOGNA
### Calibration Standards

<table>
<thead>
<tr>
<th>Sample Description</th>
<th>Area Peak (counts)</th>
<th>Concentration (ng/mL)</th>
<th>Percent Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ng/mL</td>
<td>2302</td>
<td>901 2.414346 141.4346</td>
<td></td>
</tr>
<tr>
<td>1 ng/mL</td>
<td>2303</td>
<td>193 9.09295 9.070927</td>
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</tr>
<tr>
<td>5 ng/mL</td>
<td>2304</td>
<td>2845 5.28795 5.758962</td>
<td></td>
</tr>
<tr>
<td>5 ng/mL</td>
<td>2305</td>
<td>2831 5.22153 4.301079</td>
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<tr>
<td>10 ng/mL</td>
<td>2306</td>
<td>4665 9.059299 9.457845</td>
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<tr>
<td>10 ng/mL</td>
<td>2307</td>
<td>4381 8.080405 19.19854</td>
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<tr>
<td>25 ng/mL</td>
<td>2308</td>
<td>11455 21.77707 12.89171</td>
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<td>25 ng/mL</td>
<td>2309</td>
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<td>22482 42.23472 37.10654</td>
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<tr>
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<td>2313</td>
<td>55221 107.3262 3.325271</td>
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</table>

**Average Deviation:** 11.69217

**Regression Output:**

- Constant: 0
- Std Err of Y Est: 2575.314
- R Squared: 0.925674
- No. of Observations: 12
- Degrees of Freedom: 11

**Y Coefficient:** 8.441797

**Std Err of Coef:** 11.64409

The calculated concentration of Propantheline in the samples is determined by the following equation:

\[
\text{Propantheline Conc. (ng/mL)} = \left( \frac{\text{Area Peak}}{\text{X-Coefficient}} \right) \times \text{Multiplier}
\]

**Multiplier:**
- 1.001 for QC standard
- 0.999 for sample extract

Where the Y-Coefficient is determined by performing linear regression on the actual standard concentration and the observed area peak. The linear regression is constrained through the origin.
**DATA SUMMARY PAGE 2 OF 2**  
**SCHOOL78**  
**INITIALS:**  
**DATE:**  
**MATRIX:** BOLOKSA

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<th>AVERAGE</th>
<th>RECOVERY</th>
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</table>

NA = NOT APPLICABLE

**EXPECTED CONCENTRATION = (FORTIFICATION LEVEL, MG/ML x SAMPLE WT.) / FINAL VOLUME**

*THE SECOND INJECTION FOR 2212 WAS A BAD INJECTION AND THE AREA WAS NOT USED IN THE AVERAGE. (AREA=134128)*

**SUMMARY OF RESULTS:**

<table>
<thead>
<tr>
<th>RELATIVE *</th>
<th>AVERAGE</th>
<th>STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECOVERY</td>
<td>DEVIATION</td>
<td></td>
</tr>
<tr>
<td>0.2 PPM SPIKE</td>
<td>99.3</td>
<td>7.1</td>
</tr>
<tr>
<td>0.1 PPM SPIKE</td>
<td>99.3</td>
<td>2.3</td>
</tr>
</tbody>
</table>

* RELATIVE STANDARD DEVIATION = (STANDARD DEVIATION/ AVERAGE) x 100
Sequence Calibration Sample
File: D:\CHEMPC\DATA\BOLOGNA\O901011.D
Operator: STEVE SUMMER
Date Acquired: 14 Mar 91 1:15 pm
Method File Name: PROPET1.M
Sample Name: CAL STD 25 NG/ML EXT #45547-23-09
Misc Info: SC900078
Bottle Number: 9

PROPETAMPHOS (SC900078)
Calibration Last Updated: Fri Mar 15 01:24:07 1991
External Standard

Reference Window: 5 Percent
Non-Reference Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 1
Default Sample Amount: 0

Compound Information

*** Compound 1 ***

Name: PROPETAMPHOS ( )
Ret. Time 9.70 min., Extract & Integrate from 9.60 to 9.80 min.

<table>
<thead>
<tr>
<th>Signal</th>
<th>Rel Resp.</th>
<th>Pct. Unc.(rel)</th>
<th>Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tgt 138</td>
<td>0</td>
<td>20</td>
<td>PROPET1.E</td>
</tr>
<tr>
<td>Q1 194</td>
<td>0</td>
<td></td>
<td>PROPET1.E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lvl ID</th>
<th>Amt (UG/G)</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>901</td>
</tr>
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<td>5</td>
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<td>2849</td>
</tr>
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<td>10</td>
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<td>4645</td>
</tr>
<tr>
<td>25</td>
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<td>25862</td>
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<tr>
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Qualifier Peak Analysis ON
Curve Fit: Linear, Forced Through Origin
Battelle Study Number SC900078
Zocon Study Number 1538

File: C:\CHEMPC\DATA\BOLOGNA\0901011.D
Operator: STEVE SUMMER
Date Acquired: 14 Mar 91 1:15 pm
Method File Name: PROPET1.M
Sample Name: CAL STD 25 NG/ML EXT #45547-23-09
Misc Info: SC900078
Bottle Number: 9

Abundance

Ion 138.00: 0901011.D

PROPETAMPHOS

Page 49 of 152
PROPETAMPHOS (SC900078)

Calibration Last Updated: Fri Mar 15 01:26:56 1991
External Standard Report - DETAILED

Information from Data File:
File: D:\CHEMPC\DATA\BOLOGNA\1701019.D
Operator: STEVE SUMMER
Date Acquired: 14 Mar 91 4:46 pm
Method File Name: PROPET1.M
Sample Name: BOLOGNA BLANK EXT #45547-22-14
Misc Info: SC900078
Bottle Number: 17

Report Style:
Graphics: (On) Off
Compounds: (All) Single

Quantitation Settings:
Reference Peak Window: 5 Percent
Non-Reference Peak Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 0.008
Default Sample Amount: 0
Peak Type decoding: * -> Time Reference Peak

Number of Compounds in Database: 1

Time Reference Peaks:

<table>
<thead>
<tr>
<th>Pk#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>

Page 50 of 154
Compound: PROCETAMPHOS
Ret Time: 9.65
Amount: 0.01 UG/G
Pk # and Type: 1
# Qualifiers Not Satisfied

Signal Ratios

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<thead>
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<th>Limits</th>
<th>RT Limits</th>
<th>Area</th>
<th>Integ Type</th>
</tr>
</thead>
<tbody>
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<td>194</td>
<td>0.0-0.0</td>
<td>0.00</td>
<td>9.94</td>
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<tr>
<td>Q2</td>
<td>0</td>
<td></td>
<td>to</td>
<td>0</td>
</tr>
<tr>
<td>Q3</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

CALIBRATION CURVE -- BOLOGNA MATRIX

Response = 5.42e-002 * Amt
Corr Coef = 0.987  Curve Fit: Linear/Origin
PROPETAMPHOS (SC900078)

Calibration Last Updated: Fri Mar 15 01:26:56 1991
External Standard Report - DETAILED

Information from Data File:
File: D:\CHEMPC\DATA\BOLOGNA\1901021.D
Operator: STEVE SUMMER
Date Acquired: 14 Mar 91 5:38 pm
Method File Name: PROPET1.M
Sample Name: 0.1 PPM BOLOGNA.SPIKE EXT #45547-22-08
Misc Info: SC900078
Bottle Number: 19

Report Style:
Graphics: (On) Off
Compounds: (All) Single

Quantitation Settings:
Reference Peak Window: 5 Percent
Non-Reference Peak Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 0.008
Default Sample Amount: 0
Peak Type decoding: * -> Time Reference Peak

Number of Compounds in Database: 1

Time Reference Peaks:

<table>
<thead>
<tr>
<th>Pk#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>

Page 53 of 154
**COMPONENT: PROPETAMPHOS**

- **Ret Time:** 9.70
- **Amount:** 0.07 ug/g
- **Pk # and Type:** 1

### Signal Ratios

<table>
<thead>
<tr>
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<th>Limits</th>
<th>RT Limits</th>
<th>Area</th>
<th>Integ Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tgt</td>
<td>138</td>
<td>100.0%</td>
<td>9.70</td>
<td>4913</td>
<td>PROPET1</td>
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<tr>
<td>Q1</td>
<td>194</td>
<td>52.4</td>
<td>9.70 to 9.74</td>
<td>2574</td>
<td>PROPET1</td>
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<tr>
<td>Q2</td>
<td>0</td>
<td>0.0 - 0.0</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

### Calibration Curve

**CALIBRATION CURVE -- BOLOGNA MATRIX**

- **Response** = 5.42e-002 * Amount
- **Corr Coef** = 0.987
- **Curve Fit** = Linear/Origin
APPENDIX 4

DETAILED ANALYTICAL DATA - BREAD
CALIBRATION STANDARDS

<table>
<thead>
<tr>
<th>SAMPLE</th>
<th>LEE NUMBER</th>
<th>PEAK</th>
<th>AREA</th>
<th>CONC.</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 NB/ML</td>
<td>4402</td>
<td>786</td>
<td>782</td>
<td>0.889596</td>
<td>31.0630</td>
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<tr>
<td>1 NB/ML</td>
<td>4403</td>
<td>780</td>
<td>0.882857</td>
<td>31.7857</td>
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<tr>
<td>5 NB/ML</td>
<td>4404</td>
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<td>1126</td>
<td>2.367399</td>
<td>52.6560</td>
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<td>5 NB/ML</td>
<td>4405</td>
<td>1146</td>
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<td>5.372013</td>
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<td>10 NB/ML</td>
<td>4406</td>
<td>7097</td>
<td>7090</td>
<td>8.315398</td>
<td>18.6946</td>
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<td>10 NB/ML</td>
<td>4407</td>
<td>3343</td>
<td>3.445607</td>
<td>5.584522</td>
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<tr>
<td>25 NB/ML</td>
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<td>19882</td>
<td>19881</td>
<td>22.07203</td>
<td>10.9154</td>
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<td>25 NB/ML</td>
<td>4409</td>
<td>19480</td>
<td>22.04004</td>
<td>10.62079</td>
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<tr>
<td>50 NB/ML</td>
<td>4410</td>
<td>4232</td>
<td>4232</td>
<td>45.79338</td>
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<tr>
<td>50 NB/ML</td>
<td>4411</td>
<td>8234</td>
<td>8234</td>
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<td>112.9273</td>
<td>1.927326</td>
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<td>8748</td>
<td>8748</td>
<td>92.22222</td>
<td>0.701386</td>
</tr>
</tbody>
</table>

AVERAGE DEVIATION = 0.22662

Regression Output:
- Constant: 1
- Std Dev of Y est: 0.207, 0.226
- R Squared: 0.997
- No. of Observations: 11
- Degrees of Freedom: 10
- A Coefficient of: 101.7 (99.9)
- Std Dev of Coef.: 0.167, 0.175

The calculated concentration of pentachlorophenol in the sample is determined by the following equation:

PENTACHLOROPHENOL CONC. (NB/ML) = PEAK AREA × COEFFICIENT / FACTOR

MULTIPLIER: 0.001 FOR PEAK AREA
0.001 FOR SAMPLE EXTRACT

Where the coefficient is determined by performing a linear regression of the actual standard concentration vs. the observed peak area. The linear regression is constrained through the origin.
## DATA SUMMARY PAGE 2 OF 2

**Battelle Study Number SC900078**

**Zoecon Study Number 153B**

<table>
<thead>
<tr>
<th>SAMPLE DESCRIPTION</th>
<th>LBS NUMBER</th>
<th>PEAK CONC.</th>
<th>CONC.</th>
<th>PERCENT</th>
<th>PERCENT UNC.</th>
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<tbody>
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<td>4414</td>
<td>0.08937E</td>
<td>0.85</td>
<td>0.05</td>
<td>287.9568</td>
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<td>0.05373E</td>
<td>0.53</td>
<td>0.05</td>
<td>287.5630</td>
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<td>4315</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>SOLVENT BLANK</td>
<td>4315</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>NA</td>
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<tr>
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<td>MATRIX BLANK</td>
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<td>0</td>
<td>0</td>
<td>NA</td>
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</table>

**NA = NOT APPLICABLE**

**EXPECTED CONCENTRATION = PARTITIONING LEVEL, UNLESS SAMPLE WT. = FINAL VOLUME**

### SUMMARY OF REACTION:

<table>
<thead>
<tr>
<th>RELATIVE STANDARD DEVIATION</th>
<th>STANDARD DEVIATION</th>
<th>RELATIVE STANDARD DEVIATION</th>
<th>STANDARD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 PPM SPIKE</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>0.3 PPM SPIKE</td>
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<td>0.3</td>
<td>0.3</td>
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</tbody>
</table>

* RELATIVE STANDARD DEVIATION = STANDARD DEVIATION / AVERAGE * 100
**Sequence Calibration Sample**

- **File:** D:\CHEMPC\DATA\BREAD\0901011.D
- **Operator:** STEVE SUMMER
- **Date Acquired:** 15 Mar 91 6:28 am
- **Method File Name:** PROPET1.M
- **Sample Name:** CAL STD 25 NG/ML EXT #45547-44-09
- **Sample Name:** SC900078
- **Bottle Number:** 9

**PROPETAMPHOS (SC900078)**

- **Calibration Last Updated:** Fri Mar 15 16:47:39 1991
- **External Standard**

**Reference Window:** 5 Percent
**Non-Reference Window:** 5 Percent
**Correlation Window:** 0.03 minutes
**Default Multiplier:** 1
**Default Sample Amount:** 0

**Compound Information**

---

*** Compound 1 ***

- **Name:** PROPETAMPHOS
- **Ret. Time:** 9.62 min., Extract & Integrate from 9.52 to 9.72 min.

<table>
<thead>
<tr>
<th>Signal</th>
<th>Rel Resp.</th>
<th>Pct. Unc.(rel)</th>
<th>Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tgt 138</td>
<td>0</td>
<td>20</td>
<td>PROPET1.E</td>
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<td>Gl 194</td>
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<td>PROPET1.E</td>
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<th>Lvl ID</th>
<th>Amt (UG/G)</th>
<th>Response</th>
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</thead>
<tbody>
<tr>
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**Qualifier Peak Analysis ON**
**Curve Fit:** Linear, Forced Through Origin
Battelle Study Number SC900078
Zoecon Study Number 1538

File: C:\CHEMPC\DATA\BREAD\0901011.D
Operator: STEVE SUMMER
Date Acquired: 15 Mar 91 6:28 am
Method File Name: PROPET1.M
Sample Name: CAL STD 25 NG/ML EXT #45547-44-09
Misc Info: SC900078
Bottle Number: 9

Abundance

Ion 138.00: 0901011.D

PROPETAMPHOS
**Information from Data File:**
- **File:** D:\CHEMPC\DATA\BREAD\1701019.D
- **Operator:** STEVE SUMMER
- **Date Acquired:** 15 Mar 91 9:57 am
- **Method File Name:** PROPET1.M
- **Sample Name:** BREAD BLANK EXT #45547-43-14
- **Misc Info:** SC900078
- **Bottle Number:** 17

**Report Style:**
- **Graphics:** (On) Off
- **Compounds:** (All) Single

**Quantitation Settings:**
- **Reference Peak Window:** 5 Percent
- **Non-Reference Peak Window:** 5 Percent
- **Correlation Window:** 0.03 minutes
- **Default Multiplier:** 0.008
- **Default Sample Amount:** 0
- **Peak Type decoding:** * -> Time Reference Peak

**Number of Compounds in Database:** 1

**Time Reference Peaks:**

<table>
<thead>
<tr>
<th>PK#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>

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Page 61 of 154
File: D:\CHEMPC\DATA\BREAD\1701019.D
Operator: STEVE SUMMER
Date Acquired: 15 Mar 91  9:57 am
Method File Name: PROPET1.M
Sample Name: BREAD BLANK EXT #45547-43-14
Misc Info: SC900078
Bottle Number: 17

Compound: PROPETAMPHOS
Ret Time: 
Amount: 
Pk # and Type: 1
***** NOT FOUND ****
Battelle Study Number SC900078
Zoecon Study Number 1538

File: C:\CHEMPC\DATA\BREAD\1701019.D
Operator: STEVE SUMMER
Date Acquired: 15 Mar 91 9:57 am
Method File Name: PROPET1.M
Sample Name: BREAD BLANK EXT #45547-43-14
Misc Info: SC900078
Bottle Number: 17

Abundance

Ion 138.00: 1701019.D

PROPETAMPHOS

Page 53 of 154
Information from Data File:
File: D:\CHEMPC\DATA\BREAD\1901021.D  
Operator: STEVE SUMMER  
Date Acquired: 15 Mar 91 10:49 am  
Method File Name: PROPET1.M  
Sample Name: 0.1 PPM BREAD SPIKE EXT #45547-43-02  
Misc Info: SC900078  
Bottle Number: 19

Report Style:
- Graphics: On  
- Compounds: All  

Quantitation Settings:
- Reference Peak Window: 5 Percent  
- Non-Reference Peak Window: 5 Percent  
- Correlation Window: 0.03 minutes  
- Default Multiplier: 0.058  
- Default Sample Amount: 0  
- Peak Type decoding: * -> Time Reference Peak

Number of Compounds in Database: 1

Time Reference Peaks:

| Pk# | Compound | Expected RT | Actual RT |
PROPETAMPHOS (SC900078) Battelle Study Number SC900078
Zoecon Study Number 1538

File: D:\CHEMPC\DATA\BREAD\1901021.D
Operator: STEVE SUMMER
Date Acquired: 15 Mar 91 10:49 am
Method File Name: PROPET1.M
Sample Name: 0.1 PPM BREAD SPIKE EXT #45547-43-08
Misc Info: SC900078
Bottle Number: 19

Compound: PROPETAMPHOS
Ret Time: 9.62
Amount: 0.08 UG/G
Pk # and Type: 1
# Qualifiers Not Satisfied

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<thead>
<tr>
<th>Signal</th>
<th>Ratios</th>
<th>Limits</th>
<th>RT</th>
<th>Limits</th>
<th>Area</th>
<th>Integ Type</th>
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<td>to</td>
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PROPETAMPHOS

CALIBRATION CURVE -- BREAD MATRIX

Response = 8.84e-002 * Amplitude
Corr Coef = 0.999 Curve Fit: Linear/Origin
Battelle Study Number SC900078
Zoecon Study Number 1538

File: C:\CHEMPC\DATA\BREAD\1901021.D
Operator: STEVE SUMMER
Date Acquired: 15 Mar 91 10:49 am
Method File Name: PROPET1.M
Sample Name: 0.1 PPM BREAD SPIKE EXT #45547-43-08
Misc Info: SC900078
Bottle Number: 19

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<th>10.00</th>
<th>11.00</th>
<th>12.00</th>
<th>13.00</th>
<th>14.00</th>
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</thead>
<tbody>
<tr>
<td>Abundance</td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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</table>

Ion 138.00: 1901021.D

PROPETAMPHOS
**CALIBRATION STANDARDS**

<table>
<thead>
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<th>SAMPLE</th>
<th>LBE NUMBER</th>
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<th>AREA AVERAGE</th>
<th>CONC.</th>
<th>PERCENT</th>
<th>DEVIATION</th>
</tr>
</thead>
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<td>534.1.355252</td>
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<tr>
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<td>7365</td>
<td>7673.21.176121</td>
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<tr>
<td>25 KG X</td>
<td>6209</td>
<td>7965</td>
<td>11.77325</td>
<td>6.082435</td>
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<tr>
<td>50 KG X</td>
<td>6210</td>
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<td>56.6944.7477</td>
<td>10.43044</td>
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<td>100 KG X</td>
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<td>103.7233</td>
<td>3.312303</td>
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<tr>
<td>100 KG X</td>
<td>6213</td>
<td>10854</td>
<td>103.7233</td>
<td>3.312303</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AVERAGE DEVIATION: 0.05975**

**Regression Output:**

- Constant: 0
- Std Err of Y Est: 1015.449
- R Squared: 0.997735
- No. of Observations: 11
- Degrees of Freedom: 10

**X Coefficients:**

- Std Err of Coef: 0.05975

**THE CALCULATED CONCENTRATION OF PROPFENAMOS IN THE SAMPLES IS DETERMINED BY THE FOLLOWING EQUATION:**

`PROPFENAMOS CONC. (X) = (PEAK AREA - X-COEFFICIENT/MULTIPLIER)`

**MULTIPLIER = 100 FOR 10 KG STANDARDS**

**MULTIPLIER = 1000 FOR 100 KG STANDARDS**

WHERE THE MULTIPLIER IS DETERMINED BY PERFORMING LINEAR REGRESSION IN THE INITIAL STANDARDS CONCENTRATION AND THE OBSERVED PEAK AREA, THE LINEAR REGRESSION IS COMPUTED USING THE MATHグルP.
<table>
<thead>
<tr>
<th>SAMPLE DESCRIPTION</th>
<th>LAB NUMBER</th>
<th>PEAK</th>
<th>CONC. (US/G)</th>
<th>CONC. (US/G)</th>
<th>PERCENT</th>
<th>PERCENT RECOVERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 MG/ML STD.</td>
<td>4124</td>
<td>1254</td>
<td>0.023171</td>
<td>0.025</td>
<td>119.0912</td>
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<tr>
<td>25 MG/ML STD.</td>
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<td>10122</td>
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<tr>
<td>SOLVENT BLANK</td>
<td>4114</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>SOLVENT BLANK</td>
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<td>0</td>
<td>0</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>MATRIX BLANK</td>
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<td>0</td>
<td>0</td>
<td>NA</td>
<td>NA</td>
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<td>0</td>
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<td>NA</td>
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<tr>
<td>0.01 PPM SPICE</td>
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<tr>
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<td>0.010734</td>
<td>0.1</td>
<td>103.1462</td>
<td>99.15176</td>
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<tr>
<td>0.1 PPM SPICE</td>
<td>4125</td>
<td>4322</td>
<td>0.009040</td>
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<td>0.021446</td>
<td>0.1</td>
<td>167.1423</td>
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<tr>
<td>0.1 PPM SPICE</td>
<td>4125</td>
<td>2368</td>
<td>0.021446</td>
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<tr>
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<td>0.010419</td>
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</table>

NA = NOT APPPLICABLE

**EXPECTED CONCENTRATION** = PRECIPITATION LEVEL DEPENDING ON SAMPLE WEIGHT DILUTION

**SUMMARY OF RESULTS**

<table>
<thead>
<tr>
<th>RELATIVE STANDARD DEVIATION</th>
<th>RELATIVE STANDARD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 PPM SPICE</td>
<td>0.4</td>
</tr>
<tr>
<td>0.1 PPM SPICE</td>
<td>0.5</td>
</tr>
</tbody>
</table>

* RELATIVE STANDARD DEVIATION = STANDARD DEVIATION / AVERAGE * 100
Page 1

Sequence Calibration Sample
File: D:\CHEMPC\DATA\BUTTER1\0901011.D
Operator: STEVE SUMMER
Date Acquired: 28 Mar 91 9:41 pm
Method File Name: PROPET1.M
Sample Name: CAL STD 25 NG/ML EXT #45547-55-09
Misc Info:
Bottle Number: 9

PROPETAMPHOS (SC900078)
Calibration Last Updated: Thu Mar 28 21:34:55 1991
External Standard

Reference Window: 5 Percent
Non-Reference Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 1
Default Sample Amount: 0

Compound Information

*** Compound 1 ***

Name: PROPETAMPHOS
Ref. Time 9.51 min., Extract & Integrate from 9.41 to 9.61 min.

<table>
<thead>
<tr>
<th>Signal</th>
<th>Ret Resp.</th>
<th>Pct. Unc.(rel)</th>
<th>Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>108</td>
<td>104</td>
<td>3</td>
<td>PROPET1.E</td>
</tr>
<tr>
<td>194</td>
<td>20</td>
<td></td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Lnl ID</th>
<th>Art (UG/S)</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>534</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1879</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1166</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>7673</td>
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<td>20</td>
<td>15726</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>36168</td>
<td></td>
</tr>
</tbody>
</table>

Qualifier Peak Analysis ON
Curve Fit: Linear, Forced Through Origin

Page 70 of 154
File: D:\CHEMPC\DATA\BUTTER1\0901011.D
Operator: STEVE SUMMER
Date Acquired: 28 Mar 91 9:41 pm
Method File Name: PROPET1.M
Sample Name: CAL STD 25 NG/ML EXT #45547-98-09
Misc Info: SC900078
Bottle Number: 9

Abundance

Ion 138.00: 0901011.D

PROPETAMPHOS

Time -> 0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
PROPETAMPHOS (SC900078)  

External Standard Report - DETAILED

Information from Data File:
File:  D:\CHEMPC\DATA\BUTTER1\1701004.D
Operator:  STEVE SUMMER
Date Acquired:  29 Mar 91  10:46 am
Method File Name:  PROPET1.M
Sample Name:  BUTTER BLANK EXT #45547-58-14
Misc Info:  SC900078
Bottle Number:  17

Report Style:
Graphics:  (On) Off
Compounds:  (All) Single

Quantitation Settings:
Reference Peak Window:  5 Percent
Non-Reference Peak Window:  5 Percent
Correlation Window:  0.03 minutes
Default Multiplier:  0.008
Default Sample Amount:  0
Peak Type decoding:  *  -> Time Reference Peak

Number of Compounds in Database:  1

Time Reference Peaks:

<table>
<thead>
<tr>
<th>FK#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>

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PROPETAMPHOS (SC900078) 21 2/21/91

File: D:\CHEMPC\DATA\BUTTER1\1701004.D
Operator: STEVE SUMMER
Date Acquired: 29 Mar 91 10:46 am
Method File Name: PROPET1.M
Sample Name: BUTTER BLANK EXT #45547-56-14
SC900078
Bottle Number: 17

Compound: PROPETAMPHOS
Ret Time: 41
Amount:
PK # and Type: 1
**** NOT FOUND ****
Information from Data File:
File: D: \ CHEMPC \ DATA \ BUTTER1 \ 1901006.D
Operator: STEVE SUMMER
Date Acquired: 29 Mar 91 11:39 am
Method File Name: PROPET1.M
Sample Name: 0.1 PPM BUTTER SPIKE EXT #45547>55>08
Misc Info: SC900078
Bottle Number: 19

Report Style:
Graphics: (On) Off
Compounds: (All) Single

Quantitation Settings:
Reference Peak Window: 5 Percent
Non-Reference Peak Window: 5 Percent
Correlation Window: 0.03 minutes
Default Multiplier: 0.008
Default Sample Amount: 0
Peak Type decoding: * -> Time Reference Peak

Number of Compounds in Database: 1

Time Reference Peaks:

<table>
<thead>
<tr>
<th>Fk#</th>
<th>Compound</th>
<th>Expected RT</th>
<th>Actual RT</th>
</tr>
</thead>
</table>

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File: D:\CHEMPC\DATA\BUTTER1\1901006.D
Operator: STEVE SUMMER
Date Acquired: 29 Mar 91  11:39 am
Method File Name: PROPET1.M
Sample Name: 0.1 PPM BUTTER SPIKE EXT #45547-55\-08
Misc Info: SC900078
Bottle Number: 19

Compound: PROPETAMPHOS
Ret Time: 9.51
Amount: 0.10 UG/G
PK # and Type: 1
# Qualifiers Not Satisfied

Signal Ratios | Limits | RT Limits | Area | Integ Type
---|---|---|---|---
Target | 133 | 100.0% | 9.51 | 4217 | PROPET1
QL | 194 | 42.7 | 9.51 to 9.75 | 1801 | PROPET1
Merged | 0 | 4.6 | 0-0.0 | 0 | PROPET1

PROPETAMPHOS
CALIBRATION CURVE -- BUTTER MATRIX

Response = 1.48e-002 * Am
Corr Coef = 0.998 Curve Fit: Linear/Origin