

# SpectraAlyzer

## Start-up Calibrations

**Product:** Wheat, whole grain  
**Origin:**  
**Accessories:** Rotating Cup  
**Calibration No.:** 1000

|              | Oil %     | Moisture % | Protein %  | Ash %   |
|--------------|-----------|------------|------------|---------|
| <b>Range</b> | 0.9 – 1.5 | 11 – 15.2  | 9.1 – 12.7 | 1.3 – 2 |
| <b>SEE</b>   | 0.1       | 0.24       | 0.31       | 0.1     |
| <b>MCC</b>   | 0.65      | 0.97       | 0.96       | 0.66    |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Wheat, whole grain  
**Origin:** JAP  
**Accessories:** Rotating Cup  
**Calibration No.:** 1001

|                | Moisture % | Protein % |
|----------------|------------|-----------|
| <b>Range</b>   | 11.5-14.1  | 7.5-15.3  |
| <b>SEE</b>     | 0.1302     | 0.1317    |
| <b>MCC</b>     | 0.979571   | 0.998146  |
| <b>Samples</b> | 50         | 50        |
| SEP            | 0.146      | 0.164     |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Cocoa Liquor (pasteous)  
**Origin:**  
**Accessories:** Viscous Cup  
**Calibration No.:** 1020

|                | Water %   | Fat %       |
|----------------|-----------|-------------|
| <b>Samples</b> | 38/40     | 74/79       |
| <b>Range</b>   | 0.7 – 2.2 | 49.6 – 55.1 |
| <b>SEE</b>     | 0.06      | 0.21        |
| <b>MCC</b>     | 0.98      | 0.98        |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAnalyzer

## Start-up Calibrations

**Product:** Cocoa Beans (Whole Beans)  
**Origin:**  
**Accessory:** Rotating Cup  
**Calibration No.:** 1021

|                | Moisture % | Fat %          |
|----------------|------------|----------------|
| <b>Samples</b> | 154/166    | 153/166        |
| <b>Range</b>   | 5.3 – 8.1  | 40.9 –<br>48.6 |
| <b>SEE</b>     | 0.27       | 0.94           |
| <b>MCC</b>     | 0.82       | 0.83           |

SEE: Standard Error of Estimate  
MCC: Multiple Correlation Coefficient  
Sample Type: Whole Beans

# SpectraAlyzer

## Start-up Calibrations

**Product:** Chocolate  
**Origin:**  
**Accessories:** Open Cup  
**Calibration No.:** 1022

|              | Fat %     | Milk Fat % | Sacch. %  | H <sub>2</sub> O % | Theobromin % | Fatfree cacao % | Lactose % |
|--------------|-----------|------------|-----------|--------------------|--------------|-----------------|-----------|
| <b>Range</b> | 21.5-36.6 | 0-7        | 42.5-58.4 | 0-0.74             | 0.16-0.69    | 5-21.4          | 0-11.4    |
| <b>SEE</b>   | 0.3108    | 0.4643     | 1.3811    | 0.1265             | 0.0177       | 0.5595          | 0.8806    |
| <b>MCC</b>   | 0.9972    | 0.9799     | 0.9516    | 0.6584             | 0.9959       | 0.9958          | 0.9780    |
| <b>#</b>     | 60        | 60         | 60        | 60                 | 60           | 60              | 60        |

SEE: Standard Error of Estimate  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

# SpectraAlyzer

Start-up Calibrations

**Product:** Pig Feed  
**Origin:** UK  
**Calibration No.:** 1030

|                | Protein % |
|----------------|-----------|
| <b>Range</b>   |           |
| <b>SEP</b>     | 0.23      |
| <b>MCC</b>     | 0.957     |
| <b>Samples</b> |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

Start-up Calibrations

**Product:** Rapemeal, ground  
**Origin:**  
**Calibration No.:** 1040

|              | <b>Protein %</b> | <b>Moisture %</b> | <b>Oil %</b> |
|--------------|------------------|-------------------|--------------|
| <b>Range</b> | 35.12-<br>43.9   | 6.7-<br>10.4      | 2.2-<br>8.3  |
| <b>SEE</b>   | 0.48             | 0.13              | 0.28         |
| <b>MCC</b>   | 0.9747           | 0.9910            | 0.9807       |

SEE: Standard Error of Estimate  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Rape Meal, Pellets,ground  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1050

|                | <b>Protein %</b> | <b>Moisture %</b> | <b>Fat %</b> | <b>Fiber %</b> | <b>Ash %</b> |
|----------------|------------------|-------------------|--------------|----------------|--------------|
| <b>Range</b>   | 31.9-40.0        | 8.1-13.0          | 1.3-4.3      | 10.8-12.6      | 6.4-8.6      |
| <b>SEE</b>     | 0.35             | 0.27              | 0.12         | 0.25           | 0.18         |
| <b>MCC</b>     | 0.97             | 0.97              | 0.98         | 0.81           | 0.91         |
| <b>Samples</b> | 112              | 108               | 106          | 88             | 104          |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient



# SpectraAlyzer

## Start-up Calibrations

**Product:** Soy meal, pellets, ground  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1060

|                | Protein % | Moisture % | Fat %   | Fiber %  | Ash %   |
|----------------|-----------|------------|---------|----------|---------|
| <b>Range</b>   | 38.4-47.2 | 10.9-14.6  | 0.6-3.0 | 5.1-12.7 | 5.5-8.7 |
| <b>SEE</b>     | 0.57      | 0.31       | 0.14    | 0.38     | 0.20    |
| <b>MCC</b>     | 0.96      | 0.93       | 0.93    | 0.97     | 0.97    |
| <b>Samples</b> | 366       | 348        | 344     | 310      | 49      |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Soymeal, ground  
**Origin:**  
**Calibration No.:** 1070

|                | <b>Protein %</b> | <b>Protein<br/>44 % range</b> | <b>Protein<br/>48 % range</b> | <b>Moisture %</b> | <b>Fat %</b>    | <b>Fiber %</b> |
|----------------|------------------|-------------------------------|-------------------------------|-------------------|-----------------|----------------|
| <b>Range</b>   | 44.35-50.61      | 44.35-46.20                   | 48.31-50.61                   | 9.24-<br>11.56    | 0.648-<br>1.995 | 2.43-<br>7.55  |
| <b>SEE</b>     | 0.45             | 0.36                          | 0.36                          | 0.17              | 0.069           | 0.24           |
| <b>MCC</b>     | 0.9766           | 0.9851                        | 0.9851                        | 0.9514            | 0.9793          | 0.9684         |
| <b>SEE/Lab</b> | 0.23             | 0.23                          | 0.23                          | 0.18              | 0.099           | 0.17           |
| <b>Reprod.</b> | 0.27             | 0.18                          | 0.18                          | 0.12              | 0.037           | 0.31           |

SEE: Standard Error of Estimate  
MCC: Multiple Correlation Coefficient  
SEE/Lab: Standard Error of Reference Method  
Reprod.: Standard Error of reproduced measurements

# SpectraAlyzer

## Start-up Calibrations

**Product:** Soy beans, ground  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1072

|                       | Moisture % | Protein %   | Fat %       |
|-----------------------|------------|-------------|-------------|
| <b>Range</b>          | 5,86-9,26  | 33,58-36,99 | 17,25-21,60 |
| <b>SEE</b>            | 0,304      | 0,278       | 0,206       |
| <b>MCC</b>            | 0,9110     | 0,8360      | 0,9750      |
| <b>No. of samples</b> |            |             |             |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Sunflower Seeds (Whole Seeds)  
**Origin:** Germany  
**Accessory:** Rotating Cup  
**Calibration No.:** 1080

|                       | <b>Fat %</b> | <b>Moisture %</b> |
|-----------------------|--------------|-------------------|
| <b>Range</b>          | 41.5 - 48.3  | 5.5 - 8.5         |
| <b>SEE</b>            | 0.74         | 0.30              |
| <b>MCC</b>            | 0.88         | 0.88              |
| <b>No. of samples</b> | 123          |                   |

SEE: Standard Error of Estimate  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Sunflower Extract (ground)  
**Origin:** NL  
**Accessories:** Closed Cup  
**Calibration No.:** 1090

|                       | <b>Protein %</b> | <b>Fat %</b> | <b>Moisture %</b> |
|-----------------------|------------------|--------------|-------------------|
| <b>Range</b>          | 28.2 - 37.6      | 0.9 - 4.0    | 7.9 - 13.2        |
| <b>SEP</b>            | 0.66             | 0.15         | 0.36              |
| <b>MCC</b>            | 0.931            | 0.951        | 0.931             |
| <b>No. of samples</b> | 210              | 210          | 210               |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Sunflower meal, ground  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1110

|                | <b>Protein %</b> | <b>Moisture %</b> | <b>Fat %</b> | <b>Fiber %</b> | <b>Ash %</b> |
|----------------|------------------|-------------------|--------------|----------------|--------------|
| <b>Range</b>   | 28.2-37.6        | 7.9-13.0          | 1.4-3.6      | 17.4-25.2      | 5.9-8.4      |
| <b>SEE</b>     | 0.72             | 0.34              | 0.13         | 0.85           | 0.35         |
| <b>MCC</b>     | 0.91             | 0.94              | 0.94         | 0.83           | 0.81         |
| <b>Samples</b> | 138              | 134               | 132          | 134            | 126          |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Sunflower meal, ground  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1111

|              | Moisture % | Protein % | Fat %   | Fiber %   | Ash %   |
|--------------|------------|-----------|---------|-----------|---------|
| <b>Range</b> | 7.1-11.3   | 29.1-36.9 | 1.5-3.5 | 17.7-27.6 | 5.8-8.4 |
| <b>SEE</b>   | 0.21       | 0.56      | 0.11    | 0.66      | 0.13    |
| <b>MCC</b>   | 0.8825     | 0.9385    | 0.9077  | 0.9280    | 0.9786  |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Cotton seed meal  
**Origin:** USA  
**Accessories:** Closed Cup  
**Calibration No.:** 1121

|                       | Moisture % | Protein % | Fat %      |
|-----------------------|------------|-----------|------------|
| <b>Range</b>          | 8,23-10,50 | 37,3-46,3 | 0,59-1,310 |
| <b>SEE</b>            | 0,15       | 0,54      | 0,099      |
| <b>MCC</b>            | 0,9634     | 0,9293    | 0,7111     |
| <b>No. of samples</b> |            |           |            |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient



# SpectraAlyzer

## Start-up Calibrations

**Product:** Cotton seed meal, ground  
**Origin:** USA  
**Accessories:** Closed Cup  
**Calibration No.:** 1122

|                       | Moisture % | Protein % | Fat %     |
|-----------------------|------------|-----------|-----------|
| <b>Range</b>          | 2,20-4,40  | 41-45     | 4,30-6,30 |
| <b>SEE</b>            | 0,25       | 0,61      | 0,15      |
| <b>MCC</b>            | 0,9301     | 0,8431    | 0,9236    |
| <b>No. of samples</b> |            |           |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Linseed meal, ground  
**Origin:**  
**Accessories:**  
**Calibration No.:** 1130

|                  | Protein % | Moisture % | Fat %   | Fiber %  |
|------------------|-----------|------------|---------|----------|
| <b>Range</b>     | 33.9-37.0 | 8.9-14.0   | 2.2-8.0 | 9.0-11.0 |
| <b>SEE</b>       | 0.46      | 0.13       | 0.18    | 0.35     |
| <b>MCC</b>       | 0.79      | 0.99       | 0.99    | 0.78     |
| <b>Precision</b> | 0.21      | 0.06       | 0.09    | 0.16     |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Cattle Feed  
**Origin:** UK  
**Accessories:**  
**Calibration No.:** 1140

|                | Moisture % | Oil % | Protein % | Fibre % |
|----------------|------------|-------|-----------|---------|
| <b>Range</b>   | 10 – 15    | 2 – 7 | 15 – 25   | 7 –18   |
| <b>SEP</b>     | 0.28       | 0.25  | 0.40      | 0.6     |
| <b>MCC</b>     | 0.941      | 0.955 | 0.985     | 0.966   |
| <b>Samples</b> | 116        | 118   | 114       | 114     |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Dried Grass (Pellets, ground)  
**Origin:**  
**Accessories:**  
**Calibration No.:** 1150

|              | Protein %   | Moisture   |
|--------------|-------------|------------|
| <b>Range</b> | 11.2 – 18.6 | 6.0 – 10.0 |
| <b>SEP</b>   | 0.47        | 0.24       |
| <b>MCC</b>   | 0.97        | 0.96       |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Preparation:**

The dried grass pellets are carefully ground by dropping a few pellets at a time into the Retch Mill equipment with a 0.5 mm screen. Careful attention is drawn to the energy level on the Retch Mill which should not be allowed to exceed 35/40. Failure to do this will result in the motor getting hot thus driving off moisture.

**Sample Presentation:**

The powder is measured twice (repacks) in a closed cup. Results should be averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Dry (Microwave) Grass  
**Origin:**  
**Accessories:**  
**Calibration No.:** 1160

|              | Protein % | Moisture % |         |
|--------------|-----------|------------|---------|
| <b>Range</b> | 9 - 23    | 1 - 5      | 17 - 28 |
| <b>SEP</b>   | 0.31      | 0.25       | 0.8     |
| <b>MCC</b>   | 0.98      | 0.99       | 0.91    |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Preparation:**

App. 150 g of grass are microwaved to almost dryness by careful microwaving, full power for 3 minutes, stop and remix sample and a further 2x 1 minute drying. The dry sample is then ground using a conventional knife mill or suitable alternative.

**Sample Presentation:**

The powder is measured twice (repacks) in a closed cup. Results should be averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Meat and Bone Meal  
**Origin:**  
**Accessories:**  
**Calibration No.:** 1170

|                  | Protein % | Moisture % | Oil %  |
|------------------|-----------|------------|--------|
| <b>Range</b>     | 48 – 52   | 6 – 8      | 8 – 12 |
| <b>SEP</b>       | 0.6       | 0.35       | 0.3    |
| <b>Precision</b> | 0.2       | 0.15       | 0.2    |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Preparation:**  
No grinding.

**Sample Presentation:**  
The powder is measured twice (repacks) in a closed cup. Results should be averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Poultry Feed (SBC1 - dietary sodium bicarbonate)  
**Origin:** UK  
**Accessories:** Rotating Cup  
**Calibration No.:** 1180

|                | Oil %     | Moisture % | Protein %   | Ash %      |
|----------------|-----------|------------|-------------|------------|
| <b>Range</b>   | 2.5 – 4.5 | 11 – 13.5  | 14.2 – 16.5 | 8.5 – 10.5 |
| <b>SEE</b>     | 0.20      | 0.23       | 0.42        | 0.40       |
| <b>MCC</b>     | 0.79      | 0.89       | 0.73        | 0.59       |
| <b>Samples</b> |           |            |             |            |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Poultry Feed (SBC2 – dietary sodium bicarbonate)  
**Origin:** UK  
**Accessories:** Rotating Cup  
**Calibration No.:** 1190

|                | Oil %    | Moisture %  | Protein %  | Ash %     |
|----------------|----------|-------------|------------|-----------|
| <b>Range</b>   | 2.1 –3.1 | 10.9 – 12.8 | 13.5 –14.9 | 8.7 –11.6 |
| <b>SEE</b>     | 0.11     | 0.39        | 0.22       | 0.40      |
| <b>MCC</b>     | 0.879    | 0.74        | 0.85       | 0.85      |
| <b>Samples</b> |          |             |            |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.



# SpectraAlyzer

## Start-up Calibrations

**Product:** Poultry Feed (Finisher One)  
**Origin:** UK  
**Accessories:** Rotating Cup  
**Calibration No.:** 1200

|                | Oil %      | Moisture %  | Protein %   | Ash %     |
|----------------|------------|-------------|-------------|-----------|
| <b>Range</b>   | 9.3 – 10.2 | 11.1 – 12.1 | 18.4 – 19.5 | 4.9 – 5.6 |
| <b>SEE</b>     | 0.13       | 0.28        | 0.19        | 0.11      |
| <b>MCC</b>     | 0.82       | 0.56        | 0.85        | 0.78      |
| <b>Samples</b> |            |             |             |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

### Sample Presentation:

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Poultry Feed (Finisher Two)  
**Origin:** UK  
**Accessories:** Rotating Cup  
**Calibration No.:** 1210

|                | Oil %     | Moisture %  | Protein %  | Ash %     |
|----------------|-----------|-------------|------------|-----------|
| <b>Range</b>   | 8.4- 10.4 | 10.9 – 13.2 | 18.1 –20.4 | 4.8 – 6.2 |
| <b>SEE</b>     | 0.24      | 0.26        | 0.25       | 0.218     |
| <b>MCC</b>     | 0.87      | 0.89        | 0.90       | 0.79      |
| <b>Samples</b> |           |             |            |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Poultry Feed (Grower)  
**Origin:** UK  
**Accessories:** Rotating Cup  
**Calibration No.:** 1220

|                | Oil %      | Moisture %  | Protein %    | Ash %     |
|----------------|------------|-------------|--------------|-----------|
| <b>Range</b>   | 8.3 – 10.8 | 10.4 – 11.7 | 20.36 – 21.8 | 5.4 – 5.8 |
| <b>SEE</b>     | 0.4        | 0.2         | 0.3          | 0.1       |
| <b>MCC</b>     | 0.85       | 0.73        | 0.71         | 0.85      |
| <b>Samples</b> |            |             |              |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Poultry Feed (Breeder Grower)  
**Origin:** UK  
**Accessories:** Rotating Cup  
**Calibration No.:** 1230

|                | Oil %     | Moisture %  | Protein %   | Ash %     |
|----------------|-----------|-------------|-------------|-----------|
| <b>Range</b>   | 2.4 – 3.7 | 11.3 – 13.9 | 15.0 – 16.5 | 5.6 – 6.8 |
| <b>SEE</b>     | 0.1       | 0.3         | 0.2         | 0.2       |
| <b>MCC</b>     | 0.967     | 0.947       | 0.848       | 0.862     |
| <b>Samples</b> |           |             |             |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Poultry Feed (Starter)  
**Origin:** UK  
**Accessories:** Rotating Cup  
**Calibration No.:** 1240

|                | Oil %      | Moisture %  | Protein %   | Ash %     |
|----------------|------------|-------------|-------------|-----------|
| <b>Range</b>   | 5.8 – 6.66 | 10.1 –12-37 | 22.1 – 23.6 | 5.4 – 6.5 |
| <b>SEE</b>     | 0.1        | 0.3         | 0.2         | 0.2       |
| <b>MCC</b>     | 0.93       | 0.89        | 0.81        | 0.89      |
| <b>Samples</b> |            |             |             |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

### Sample Presentation:

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Wheat (ground)  
**Origin:** D  
**Accessories:** Closed Cup  
**Calibration No.:** 1260

|              | Protein % | Moisture % | Sedi % | Hardness % |
|--------------|-----------|------------|--------|------------|
| <b>Range</b> | 9-16      | 9-18       | 25-75  | 20-70      |
| <b>SEP</b>   | 0.3       | 0.5        | 8.0    | 3.5        |
| <b>MCC</b>   | 0.96      | 0.97       | 0.78   | 0.92       |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

The powder is measured twice (repacks) in a closed cup. Results should be averaged.

# SpectraAlyzer

Start-up Calibrations

**Product:** Wheat Meal, ground  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1270

|              | Protein % | Moisture % | Fat %   | Fiber %  | Ash %   | Starch %  |
|--------------|-----------|------------|---------|----------|---------|-----------|
| <b>Range</b> | 13.4-17.0 | 11.3-15.9  | 2.9-5.3 | 6.9-10.4 | 3.5-8.9 | 12.5-32.4 |
| <b>SEE</b>   | 0.21      | 0.49       | 0.15    | 0.33     | 0.23    | 1.0       |
| <b>MCC</b>   | 0.97      | 0.86       | 0.94    | 0.91     | 0.88    | 0.95      |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Hard Wheat (ground)  
**Origin:** I  
**Accessories:** Closed Cup  
**Calibration No.:** 1280

|              | Protein % | Moisture % | Gluten % |
|--------------|-----------|------------|----------|
| <b>Range</b> | 11- 17    | 10-18      |          |
| <b>SEE</b>   |           |            |          |
| <b>MCC</b>   | 0.981     | 0.99       |          |

SEP: Standard Error of Prediction  
MCC Multiple Correlation Coefficient

**Sample Presentation:**

The powder is measured twice (repacks) in a closed cup. Results should be averaged.



# SpectraAlyzer

## Start-up Calibrations

**Product:** Hard Wheat (ground)  
**Origin:** UK  
**Accessories:** Closed Cup  
**Calibration No.:** 1290

|              | Protein % | Moisture % |
|--------------|-----------|------------|
| <b>Range</b> | 8 - 14    | 10 - 18    |
| <b>SEE</b>   | 0.160     | 0.25       |
| <b>MCC</b>   | 0.985     | 0.99       |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Sample Preparation: 20-30 g ground in a Retsch-Mill using 0.5 mm screen at 10.000 rpm  
The powder is measured twice (repacks) in a closed cup. Results should be averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Soft Wheat (ground)  
**Origin:** UK  
**Accessories:** Closed Cup  
**Calibration No.:** 1300

|              | Protein % | Moisture % |
|--------------|-----------|------------|
| <b>Range</b> | 8 - 13    | 10 - 17    |
| <b>SEE</b>   | 0.25      | 0.3        |
| <b>MCC</b>   | 0.975     | 0.982      |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**  
20-30 g ground in a Retsch-Mill using 0.5 mm screen at 10.000 rpm

# SpectraAlyzer

## Start-up Calibrations

**Product:** Barley, whole grain  
**Origin:** UK  
**Accessories:** Rotating Cup  
**Calibration No.:** 1310

|                | Oil %    | Moisture % | Protein %  | Ash %     |
|----------------|----------|------------|------------|-----------|
| <b>Range</b>   | 1.3 –2.4 | 1.3 – 2.4  | 7.5 – 11.6 | 1.6 –2.44 |
| <b>SEE</b>     | 0.2      | 0.4        | 0.47       | 0.2       |
| <b>MCC</b>     | 0.69     | 0.92       | 0.905      | 0.71      |
| <b>Samples</b> |          |            |            |           |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

### Sample Presentation:

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Maize Germ, whole grain  
**Origin:**  
**Accessories:** Rotating Cup  
**Calibration No.:** 1320

|              | Oil %   | Moisture % |
|--------------|---------|------------|
| <b>Range</b> | 30 – 47 | 3 – 5      |
| <b>SEP</b>   | 1.1     | 0.17       |
| <b>MCC</b>   | 0.949   | 0.877      |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

Place 80 ml of the sample into the whole grain cup and present to the InfraAlyzer.  
This should be carried out in duplicate and the results averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Fish Meal  
**Origin:** UK  
**Accessories:** Closed Cup  
**Calibration No.:** 1330

|                | Oil %      | Moisture % | Protein %   | Ash %       |
|----------------|------------|------------|-------------|-------------|
| <b>Range</b>   | 9.1 – 10.3 | 9.3 - 15.4 | 65.1 – 69.4 | 10.6 – 11.8 |
| <b>SEE</b>     |            |            |             |             |
| <b>MCC</b>     |            |            |             |             |
| <b>Samples</b> |            |            |             |             |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

The ground sample is packed into a closed cup. Samples will normally be read in duplicate and the results are averaged

# SpectraAlyzer

## Start-up Calibrations

**Product:** Palmkernel meal, ground  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1340

|                | Protein % | Moisture % | Fat %    | Fiber %   | Ash %   |
|----------------|-----------|------------|----------|-----------|---------|
| <b>Range</b>   | 7.8-19.0  | 3.7-9.0    | 6.1-15.0 | 14.1-40.6 | 3.1-4.9 |
| <b>SEE</b>     | 0.34      | 0.23       | 0.21     | 0.89      | 0.16    |
| <b>MCC</b>     | 0.98      | 0.98       | 0.99     | 0.97      | 0.88    |
| <b>Samples</b> | 102       | 100        | 104      | 104       | 98      |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Corn  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1350

|                | Protein (as is) % | Protein (Dry Basis) % | Moisture %  |
|----------------|-------------------|-----------------------|-------------|
| <b>Range</b>   | 6.6 – 9.2         | 7 – 11                | 11.2 – 16.4 |
| <b>SEE</b>     | 0.2               | 0.2                   | 0.3         |
| <b>MCC</b>     | 0.9433            | 0.9377                | 0.947       |
| <b>Samples</b> | 117               | 119                   | 117         |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

The powder is measured twice (repacks) in a closed cup. Results should be averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Corn Gluten, ground  
**Origin:**  
**Accessories:** Closed Cup  
**Calibration No.:** 1360

|                | Protein % | Moisture % | Fat %   | Fiber % | Ash %   | Starch % |
|----------------|-----------|------------|---------|---------|---------|----------|
| <b>Range</b>   | 16.6-23.7 | 6.3-13.2   | 2.7-5.4 | 5.9-9.6 | 3.1-9.2 | 8.7-24.9 |
| <b>SEE</b>     | 0.48      | 0.27       | 0.31    | 0.42    | 0.63    | 1.32     |
| <b>MCC</b>     | 0.95      | 0.99       | 0.82    | 0.89    | 0.83    | 0.94     |
| <b>Samples</b> | 214       | 202        | 208     | 206     | 206     | 211      |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient



# SpectraAlyzer

## Start-up Calibrations

**Product:** Herring (pasteous)  
**Origin:**  
**Accessories:** Open Cup  
**Calibration No.:** 1370

|                | Water % | Fat %   |
|----------------|---------|---------|
| <b>Samples</b> | 152/166 | 157/166 |
| <b>SEE</b>     | 0.57    | 0.49    |
| <b>MCC</b>     | 0.993   | 0.996   |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Salmon (pasteous)  
**Origin:**  
**Accessories:** Open Cup  
**Calibration No.:** 1390

|                | Water % | Fat %   | Protein % |
|----------------|---------|---------|-----------|
| <b>Samples</b> | 194/206 | 199/206 | 175/206   |
| <b>SEE</b>     | 0.41    | 0.44    | 0.61      |
| <b>MCC</b>     | 0.98    | 0.98    | 0.93      |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**

The powder is measured twice (repacks) in a closed cup. Results should be averaged.

# SpectraAlyzer

## Start-up Calibrations

**Product:** Vinegar  
**Origin:** E  
**Accessories:** Liquid Cell  
**Calibration No.:** 1401

|                | Acid %     | Alcohol % |
|----------------|------------|-----------|
| <b>Range</b>   | 3.85-11.97 | 0.02-5.55 |
| <b>Samples</b> | 135        | 139       |
| <b>SEE</b>     | 0.048063   | 0.049571  |
| <b>MCC</b>     | 0.9997     | 0.9995    |
| <b>SEP</b>     | 0.84       | 0.15      |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**  
Sample 20 °C, stop flow

# SpectraAlyzer

## Start-up Calibrations

**Product:** Brandy  
**Origin:** ES  
**Accessories:** Liquid Cell  
**Calibration No.:** 1410

|                       | <b>Alcohol %</b> | <b>Sugar %</b> | <b>Dichte</b> |
|-----------------------|------------------|----------------|---------------|
| <b>Range</b>          | 34,88-40,26      | 3,0-17,5       | 0,9581-0,9617 |
| <b>SEE</b>            | 0,0387           | 0,6389         | 0,000289      |
| <b>MCC</b>            | 0,9998           | 0,9915         | 0,9733        |
| <b>No. of samples</b> | 42               | 42             | 42            |

SEP: Standard Error of Prediction  
MCC Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** HFCS  
**Origin:** USA  
**Accessories:** LC  
**Calibration No.:** 1600

|                       | <b>Solids %</b> | <b>Fructose %</b> |
|-----------------------|-----------------|-------------------|
| <b>Range</b>          | 46,1-47,8       | 40,6-43,0         |
| <b>SEE</b>            | 0,2             | 0,18              |
| <b>MCC</b>            | 0,9115          | 0,9317            |
| <b>No. of samples</b> |                 |                   |

SEP: Standard Error of Prediction  
MCC Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Butter1  
**Origin:** USA  
**Accessories:** Open Cup deep  
**Calibration No.:** 1602

|                       | Moisture %  | Fat %       |
|-----------------------|-------------|-------------|
| <b>Range</b>          | 15,12-17,85 | 79,39-81,32 |
| <b>SEE</b>            | 0,18        | 0,2         |
| <b>MCC</b>            | 0,9239      | 0,8696      |
| <b>No. of samples</b> |             |             |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Butter2  
**Origin:** USA  
**Accessories:** Open Cup deep  
**Calibration No.:** 1603

|                       | Moisture % | Fat %     |
|-----------------------|------------|-----------|
| <b>Range</b>          | 15,1-17,80 | 78,5-83,4 |
| <b>SEE</b>            | 0,22       | 0,27      |
| <b>MCC</b>            | 0,9425     | 0,9612    |
| <b>No. of samples</b> |            |           |

SEP: Standard Error of Prediction  
MCC Multiple Correlation Coefficient

# SpectraAnalyzer

## Start-up Calibrations

**Product:** Whole milk powder  
**Origin:** USA  
**Accessories:** Closed Cup  
**Calibration No.:** 1604

|                       | Moisture % | Protein %   | Fat %       |
|-----------------------|------------|-------------|-------------|
| <b>Range</b>          | 2,78-4,54  | 25,41-28,41 | 24,19-28,74 |
| <b>SEP</b>            |            |             |             |
| <b>MCC</b>            |            |             |             |
| <b>No. of samples</b> |            |             |             |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient



# SpectraAlyzer

## Start-up Calibrations

**Product:** Skim milk powder  
**Origin:** USA  
**Accessories:** Closed Cup  
**Calibration No.:** 1605

|                       | Moisture % | Protein %   | Fat %      |
|-----------------------|------------|-------------|------------|
| <b>Range</b>          | 3,21-6,13  | 35,29-38,21 | 0,760-2,52 |
| <b>SEP</b>            |            |             |            |
| <b>MCC</b>            |            |             |            |
| <b>No. of samples</b> |            |             |            |

SEP: Standard Error of Prediction  
MCC: Multiple Correlation Coefficient

# SpectraAlyzer

## Start-up Calibrations

**Product:** Chocolate  
**Origin:**  
**Accessories:**  
**Calibration No.:** ?????

|              | Fat %     | Milk Fat % | Sacch. %  | H <sub>2</sub> O % | Theo-<br>bromin % | Fafree<br>cocoa % | Lactose<br>% |
|--------------|-----------|------------|-----------|--------------------|-------------------|-------------------|--------------|
| <b>Range</b> | 21.5-36.6 | 0-7        | 42.5-58.4 | 0-0.74             | 0.16-0.69         | 5-21.4            | 0-11.4       |
| <b>SEE</b>   | 0.3108    | 0.4643     | 1.3811    | 0.1265             | 0.0177            | 0.5595            | 0.8806       |
| <b>MCC</b>   | 0.9972    | 0.9799     | 0.9516    | 0.6584             | 0.9959            | 0.9958            | 0.9780       |
| #            | 60        | 60         | 60        | 60                 | 60                | 60                | 60           |

SEE: Standard Error of Estimate  
MCC: Multiple Correlation Coefficient

**Sample Presentation:**