# 2015 AOF Test Check Program
## Monthly Report
## Round 6
## September – 2015
01/09/2015 – 01/10/2015

## Result Receival Dates

| Lab Code | Date |
|----------|------------|
| A | 29/09/2015 |
| B | N/A |
| C | 17/09/2015 |
| D | 21/09/2015 |
| E | 30/09/2015 |
| F | N/A |
| G | N/A |
| H | 11/09/2015 |
| I | 25/09/2015 |
| J | 30/09/2015 |
| K | 18/09/2015 |
| L | 09/09/2015 |
| M | 01/10/2015 |
| N | 14/09/2015 |
| O | 29/09/2015 |
| Q | 30/09/2015 |
| R | 11/09/2015 |
| S | 29/09/2015 |

## Discussion of Results

### Test Weight

Sample 1 – One outlier was identified for Lab **K** with a 24.32 kg/HL discrepancy from the lower quartile limit (63.10 kg/HL).

Sample 2 – One outlier was identified for Lab **K** with a 23.54 kg/HL discrepancy from the lower quartile limit (64.00 kg/HL).

Sample 3 – One outlier was identified for Lab **K** with a 25.67 kg/HL discrepancy from the lower quartile limit (64.13 kg/HL).

## *Impurities*

Sample 1 – No outliers were observed for this test.

Sample 2 – No outliers were observed for this test.

Sample 3 – One outlier was identified for Lab **J** with a 0.02 of a percent discrepancy from the lower quartile limit (0.59%).

## *Oil Rapid*

Sample 1 – No outliers were observed for this test.

Sample 2 – No outliers were observed for this test.

Sample 3 – Two Outliers were identified for Lab **I** and **J.** Lab **I** was 0.33 of a percent from the upper quartile limit (44.53%). Lab **J** was 0.42 of a percent discrepancy from the lower quartile limit (43.53%).

## *Oil Solvent Extraction*

Sample 1 – No outliers were observed for this test.

Sample 2 – Two Outliers were identified for Lab **D** and **M.** Lab **D** was 5.57 of a percent from the upper quartile limit (39.07%). Lab **M** was 1.41 of a percent discrepancy from the lower quartile limit (36.62%).

Sample 3 – One outlier was identified for Lab **M** with a 1.86 of a percent discrepancy from the lower quartile limit (37.77%).

Reproducibility limit of the extraction method ISO-659:2009 is R - 1.54 for oil content at ~43% in canola. Lab **D** showed outlying results which indicate a switch of samples 2 and 3. The observable difference of Lab **M** from the mean is 1.41% and 1.86% for samples 2 and 3 respectively. This indicates that Lab **M** - sample 2 is within ISO parameters while Lab **M** - sample 3 remains significantly different from the average.

6 of the 8 labs participating within the scope of the standard means removal of results submitted by the labs working outside the scope maintain the numbers to contribute to a statistically significant outcome. Removal of the labs increases variability, but the average remains relatively unaffected for sample 2, however changes significantly for sample 3. The increment in variability and change in average is not enough to encompass the outlying laboratory, and Lab **M** is still statistically highlighted as an outlier from the quartile constraints.

## Moisture Oven

Sample 1 – Outliers were identified for Lab **D** and **K** which were 0.09 and 0.06 of a percent discrepancy, respectively, from the lower quartile limit (5.45%).

Sample 2 – One outlier was identified for Lab **J** with a 0.14 of a percent discrepancy from the upper quartile limit (8.43%).

Sample 3 – Outliers were identified for Lab **D** and **K** which were 0.01 and 0.03 of a percent discrepancy, respectively, from the lower quartile limit (6.64%).

## Moisture Rapid

Sample 1 – No outliers were observed for this test.

Sample 2 – Outliers were identified for Lab **J** and **M** which were a 0.04 and 0.55 of a percent discrepancy, respectively, from the lower quartile limit (7.4%).

Sample 3 – No outliers were observed for this test.

## Oleic Oil

Sample 1 – One outlier was identified for Lab **A** with a 0.59 of a percent discrepancy from the lower quartile limit (63.05%).

Sample 2 – One outlier was identified for Lab **K** with a 2.12 of a percent discrepancy from the upper quartile limit (67.82%).

Sample 3 – Outliers were identified for Lab **A** and **K.** Lab **A** was 0.98 of a percent discrepancy from the lower quartile limit (62.57%). Lab **K** was 0.41 of a percent discrepancy from the upper quartile limit (64.79%).

## Linoleic Oil

Sample 1 – No outliers were observed for this test.

Sample 2 – One outlier was identified for Lab **M** with a 0.55 of a percent discrepancy from the lower quartile limit (16.28%).

Sample 3 – No outliers were observed for this test.

*Linolenic Oil*

There were no observable outliers for this analysis for this round; however participation is minimal and no significant observations can be made. There is a large variation between results.
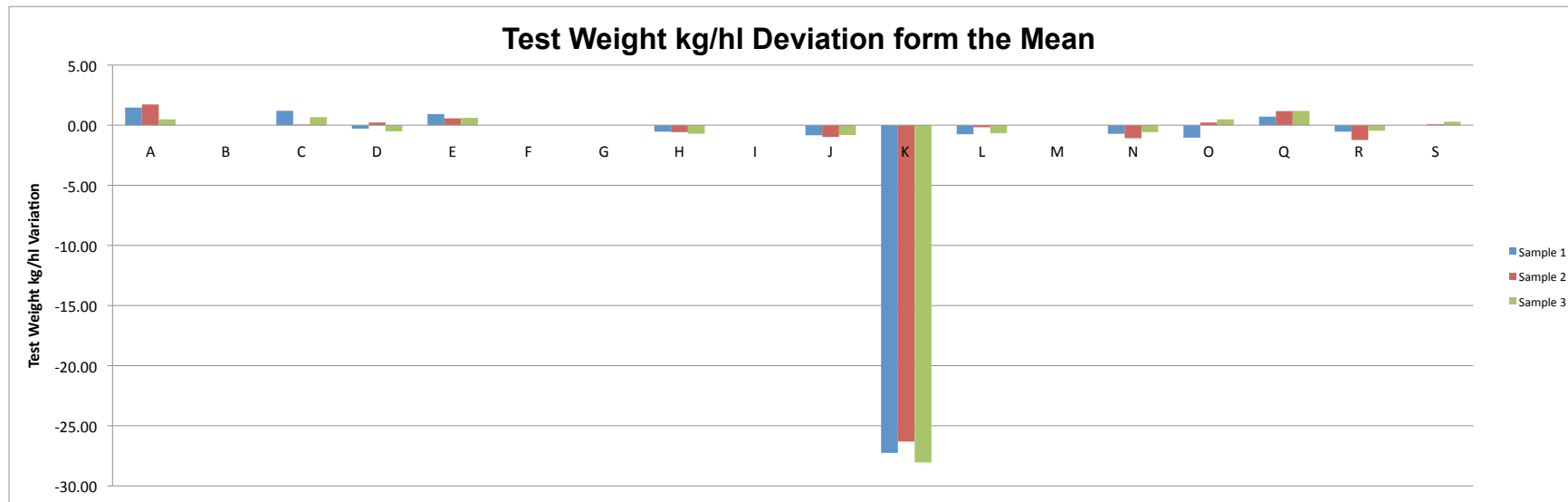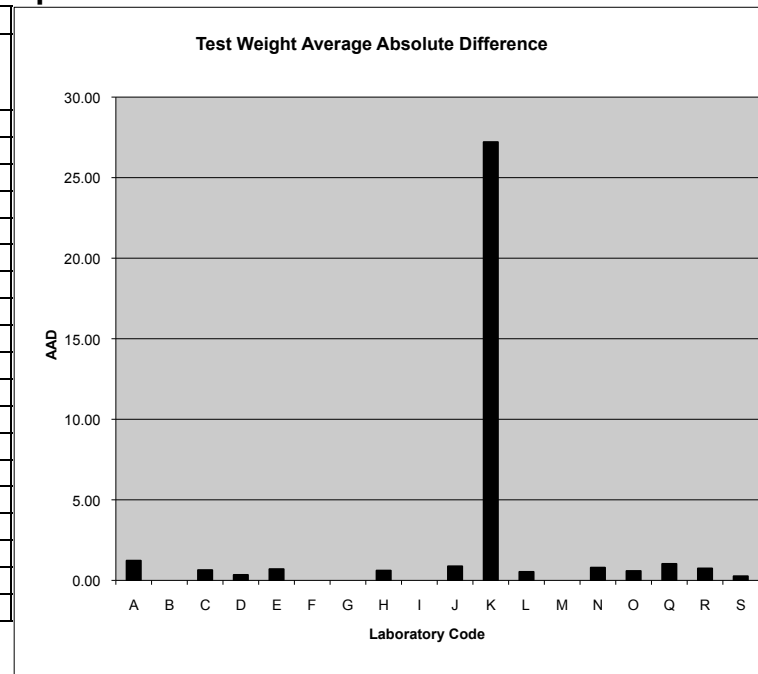
*Free Fatty Acid*

Sample 1 – No outliers were observed for this test.

Sample 2 – One outlier was identified for Lab **M** with a 3.62 of a percent discrepancy from the upper quartile limit (0.82%).

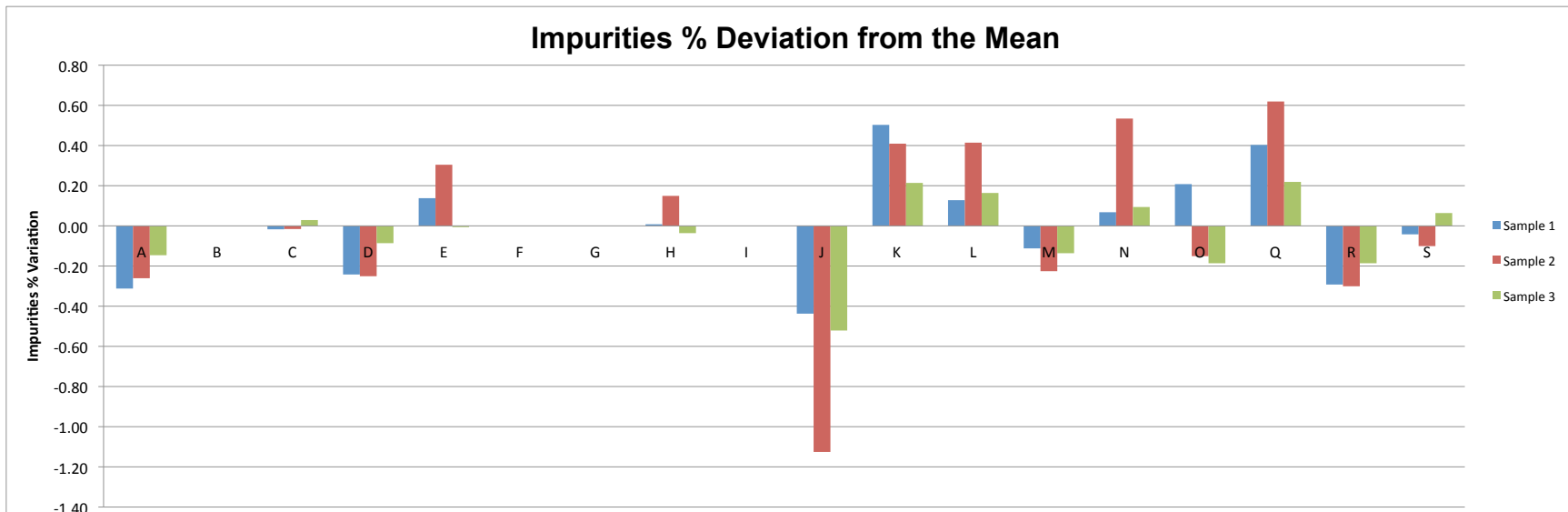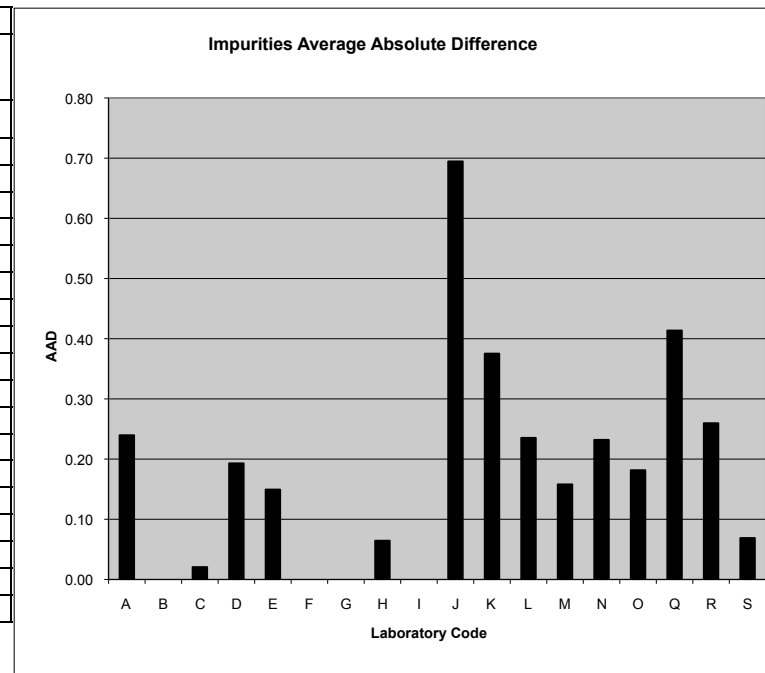Sample 3 – No outliers were observed for this test.

# 2015 AOF Test Check Program
## Round 6 Summary - September

### Test Weight kg/hl

| Lab | Sample 1 Result | Sample 1 S1-Mean | Sample 2 Result | Sample 2 S2-Mean | Sample 3 Result | Sample 3 S3-Mean | Mean of Differences | Average Absolute Difference |
|---|---|---|---|---|---|---|---|---|
| A | 67.50 | 1.46 | 68.50 | 1.72 | 67.00 | 0.49 | 1.22 | 1.22 |
| B | | | | | | | | |
| C | 67.24 | 1.20 | 66.83 | 0.05 | 67.18 | 0.67 | 0.64 | 0.64 |
| D | 65.75 | -0.29 | 67.00 | 0.22 | 66.00 | -0.51 | -0.19 | 0.34 |
| E | 66.96 | 0.92 | 67.35 | 0.57 | 67.12 | 0.61 | 0.70 | 0.70 |
| F | | | | | | | | |
| G | | | | | | | | |
| H | 65.50 | -0.54 | 66.20 | -0.58 | 65.80 | -0.71 | -0.61 | 0.61 |
| I | | | | | | | | |
| J | 65.20 | -0.84 | 65.80 | -0.98 | 65.70 | -0.81 | -0.88 | 0.88 |
| K | 38.78 | -27.26 | 40.46 | -26.32 | 38.46 | -28.05 | -27.21 | 27.21 |
| L | 65.29 | -0.75 | 66.61 | -0.17 | 65.85 | -0.66 | -0.53 | 0.53 |
| M | | | | | | | | |
| N | 65.32 | -0.72 | 65.70 | -1.08 | 65.94 | -0.58 | -0.79 | 0.79 |
| O | 65.00 | -1.04 | 67.00 | 0.22 | 67.00 | 0.49 | -0.11 | 0.58 |
| Q | 66.75 | 0.71 | 67.95 | 1.17 | 67.70 | 1.19 | 1.02 | 1.02 |
| R | 65.50 | -0.54 | 65.55 | -1.23 | 66.05 | -0.46 | -0.74 | 0.74 |
| S | 66.04 | 0.00 | 66.85 | 0.07 | 66.80 | 0.29 | 0.26 | 0.26 |
| MEAN | 66.04 | | 66.78 | | 66.51 | | | 2.73 |
| STDEV | 0.89 | | 0.89 | | 0.69 | | | |



Test Weight Average Absolute Difference



Test Weight kg/hl Deviation form the Mean

# 2015 AOF Test Check Program
# Round 6 Summary - September

| | Impurities % | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Sample 1 | | Sample 2 | | Sample 3 | | Mean of Differences | Average Absolute Difference |
| Lab | Result | S1-Mean | Result | S2-Mean | Result | S3-Mean | | |
| A | 0.98 | -0.31 | 1.89 | -0.26 | 0.94 | -0.15 | -0.24 | 0.24 |
| B | | | | | | | | |
| C | 1.28 | -0.02 | 2.14 | -0.02 | 1.12 | 0.03 | 0.00 | 0.02 |
| D | 1.05 | -0.24 | 1.90 | -0.25 | 1.00 | -0.09 | -0.19 | 0.19 |
| E | 1.43 | 0.14 | 2.46 | 0.30 | 1.08 | -0.01 | 0.15 | 0.15 |
| F | | | | | | | | |
| G | | | | | | | | |
| H | 1.30 | 0.01 | 2.30 | 0.15 | 1.05 | -0.04 | 0.04 | 0.06 |
| I | | | | | | | | |
| J | 0.86 | -0.44 | 1.03 | -1.13 | 0.57 | -0.52 | -0.69 | 0.69 |
| K | 1.80 | 0.50 | 2.56 | 0.41 | 1.30 | 0.21 | 0.38 | 0.38 |
| L | 1.42 | 0.13 | 2.57 | 0.41 | 1.25 | 0.16 | 0.24 | 0.24 |
| M | 1.18 | -0.11 | 1.93 | -0.23 | 0.95 | -0.14 | -0.16 | 0.16 |
| N | 1.36 | 0.07 | 2.69 | 0.53 | 1.18 | 0.09 | 0.23 | 0.23 |
| O | 1.50 | 0.21 | 2.00 | -0.15 | 0.90 | -0.19 | -0.04 | 0.18 |
| Q | 1.70 | 0.40 | 2.77 | 0.62 | 1.31 | 0.22 | 0.41 | 0.41 |
| R | 1.00 | -0.29 | 1.85 | -0.30 | 0.90 | -0.19 | -0.26 | 0.26 |
| S | 1.25 | -0.04 | 2.05 | -0.10 | 1.15 | 0.06 | -0.03 | 0.07 |
| MEAN | 1.29 | | 2.15 | | 1.09 | | | 0.23 |
| STDEV | 0.27 | | 0.46 | | 0.14 | | | |



Impurities Average Absolute Difference
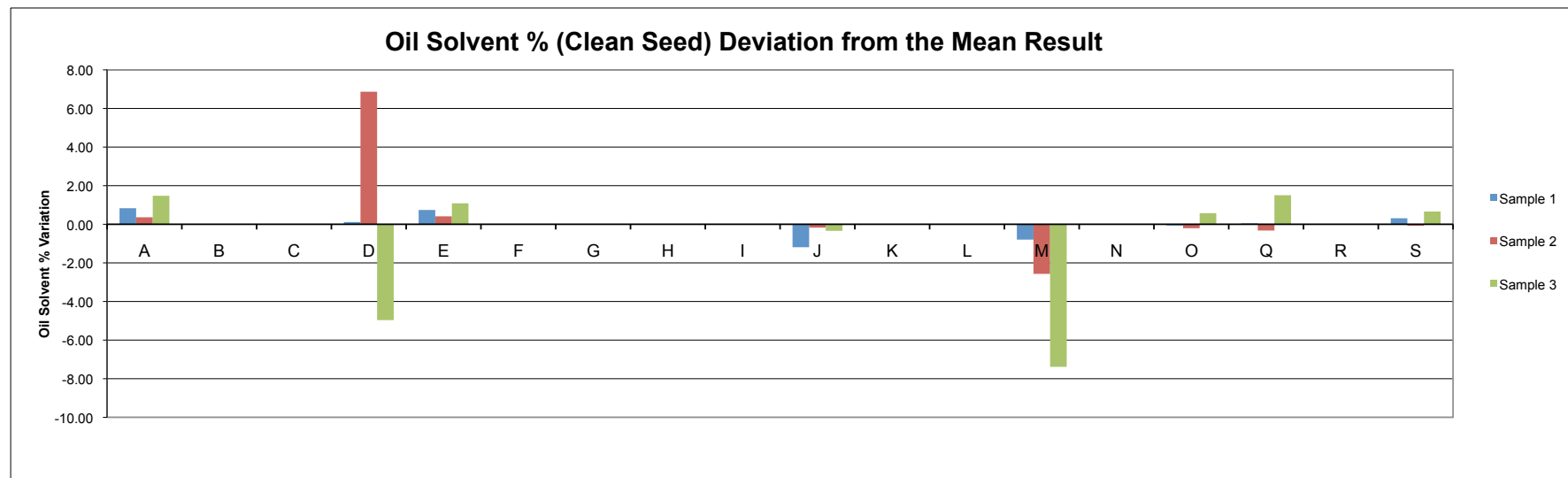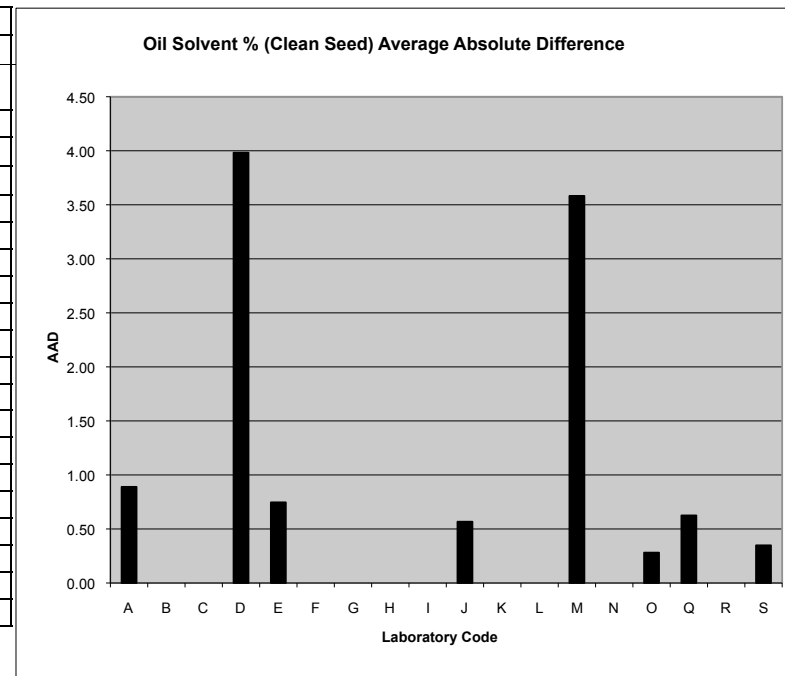


Impurities % Deviation from the Mean

# 2015 AOF Test Check Program
## Round 6 Summary - September

### Oil Rapid % (Clean Seed) Deviation from the Mean

| Lab | Sample 1 | | Sample 2 | | Sample 3 | | Mean of Differences | Average Absolute Difference |
|-----|----------|--------|----------|--------|----------|--------|------|------|
| | Result | S1-Mean | Result | S2-Mean | Result | S3-Mean | | |
| A | | | | | | | | |
| B | | | | | | | | |
| C | 45.60 | -0.34 | 37.40 | -0.32 | 43.95 | -0.07 | -0.24 | 0.24 |
| D | 45.55 | -0.39 | 37.35 | -0.37 | 43.65 | -0.37 | -0.38 | 0.38 |
| E | 45.80 | -0.14 | 37.80 | 0.08 | 44.25 | 0.23 | 0.06 | 0.15 |
| F | | | | | | | | |
| G | | | | | | | | |
| H | 46.15 | 0.21 | 37.90 | 0.18 | 43.90 | -0.12 | 0.09 | 0.17 |
| I | 46.70 | 0.76 | 37.45 | -0.27 | 44.85 | 0.83 | 0.44 | 0.62 |
| J | 45.45 | -0.49 | 37.60 | -0.12 | 43.10 | -0.92 | -0.51 | 0.51 |
| K | | | | | | | | |
| L | 46.17 | 0.23 | 37.86 | 0.14 | 44.08 | 0.05 | 0.14 | 0.14 |
| M | 45.80 | -0.14 | 37.75 | 0.03 | 44.00 | -0.02 | -0.04 | 0.06 |
| N | 46.20 | 0.26 | 38.20 | 0.48 | 44.15 | 0.13 | 0.29 | 0.29 |
| O | 45.58 | -0.36 | 37.28 | -0.44 | 43.63 | -0.39 | -0.40 | 0.40 |
| Q | 46.00 | 0.06 | 38.10 | 0.38 | 44.15 | 0.13 | 0.19 | 0.19 |
| R | 45.90 | -0.04 | 37.30 | -0.42 | 44.00 | -0.02 | -0.16 | 0.16 |
| S | 46.30 | 0.36 | 38.35 | 0.63 | 44.50 | 0.48 | 0.49 | 0.49 |
| MEAN | 45.94 | | 37.72 | | 44.02 | | | 0.29 |
| STDEV | 0.36 | | 0.36 | | 0.25 | | | |



Oil Rapid % (Clean Seed) Average Absolute Difference



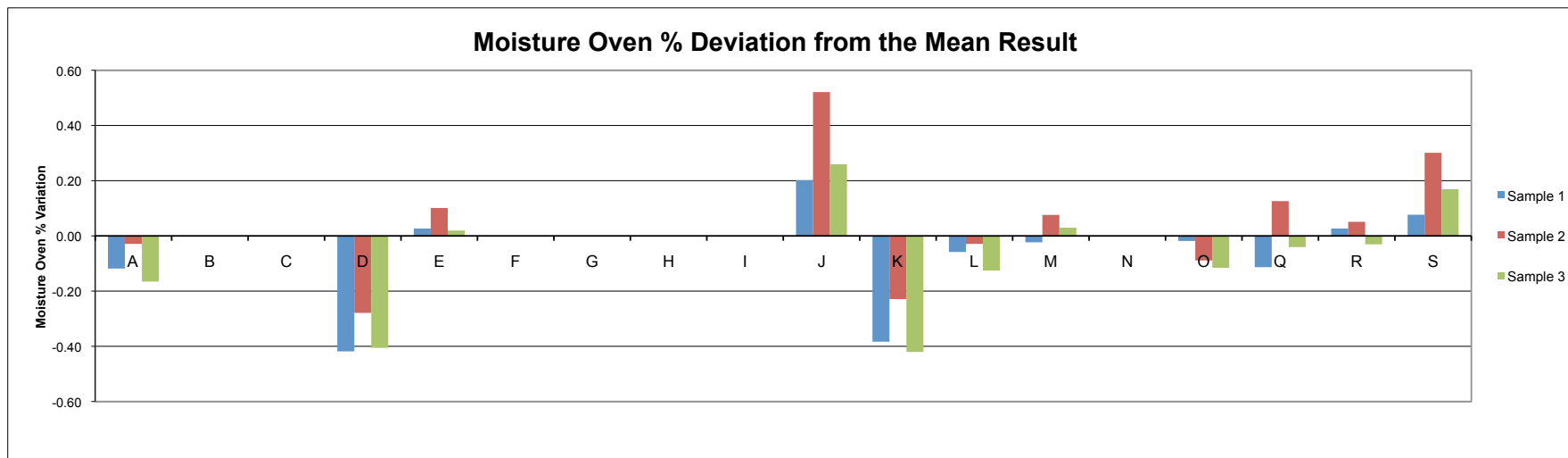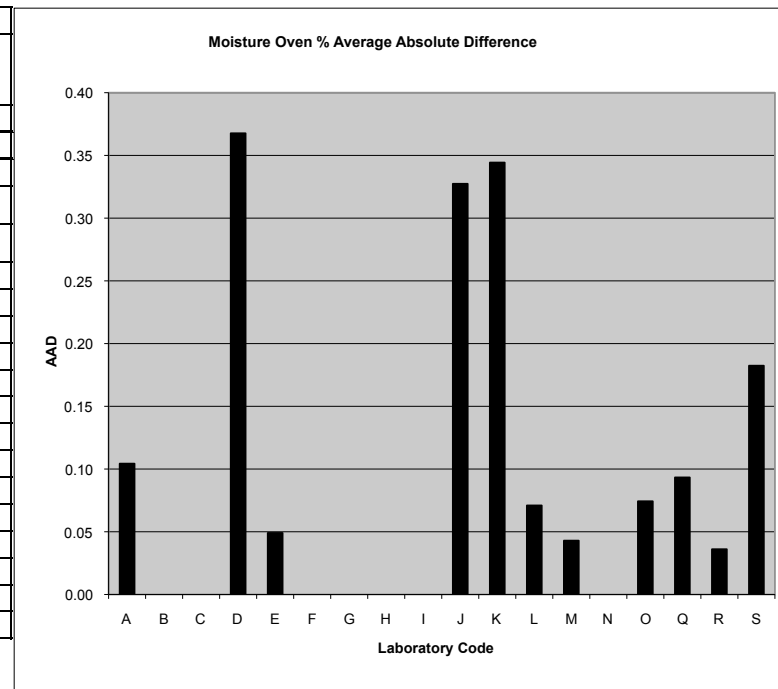Oil Rapid % (Clean Seed) Deviation from the Mean Result
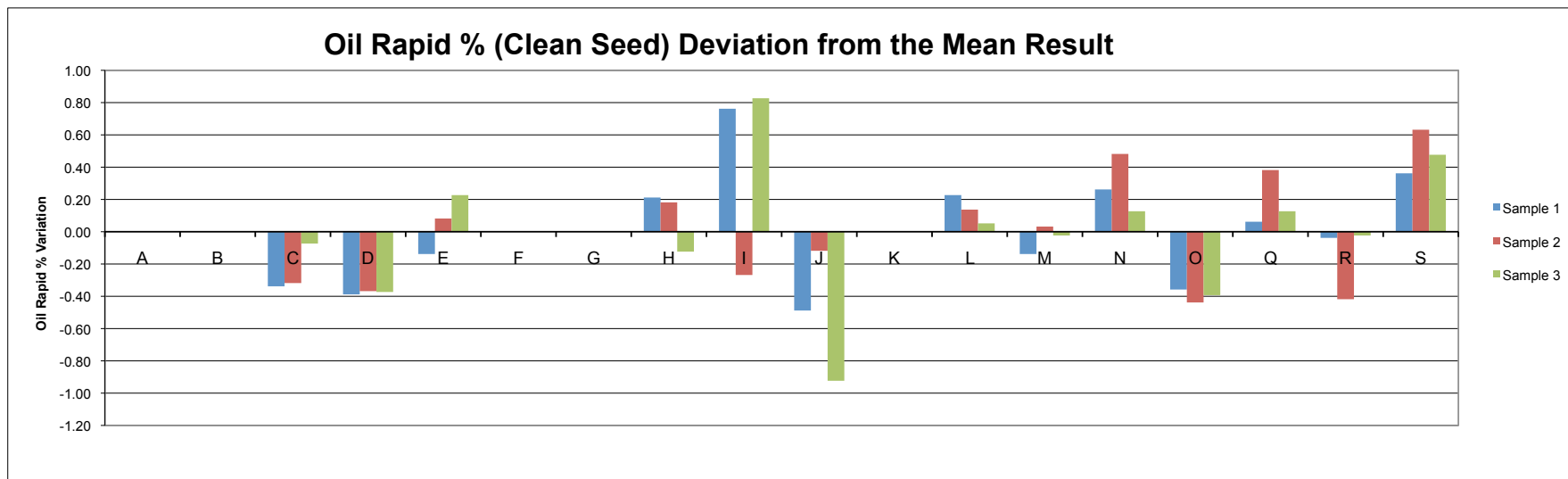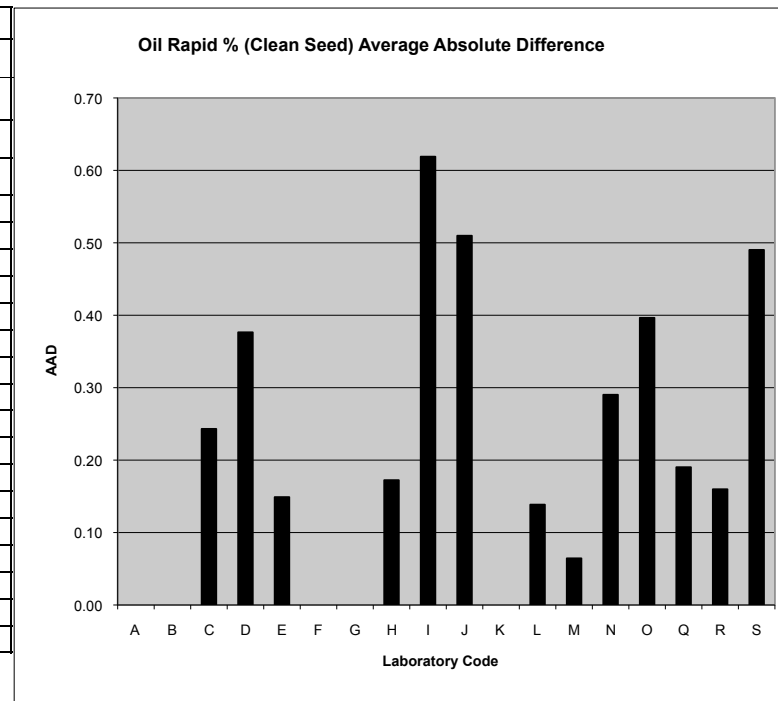
# 2015 AOF Test Check Program
## Round 6 Summary - September

### Oil Solvent % (Clean Seed) Deviation from the Mean

| Lab | Sample 1 Result | S1-Mean | Sample 2 Result | S2-Mean | Sample 3 Result | S3-Mean | Mean of Differences | Average Absolute Difference |
|-----|--------|---------|--------|---------|--------|---------|---------|---------|
| A | 46.92 | 0.83 | 38.14 | 0.36 | 44.77 | 1.48 | 0.89 | 0.89 |
| B | | | | | | | | |
| C | | | | | | | | |
| D | 46.21 | 0.12 | 44.64 | 6.87 | 38.33 | -4.96 | 0.67 | 3.98 |
| E | 46.83 | 0.74 | 38.19 | 0.41 | 44.38 | 1.09 | 0.75 | 0.75 |
| F | | | | | | | | |
| G | | | | | | | | |
| H | | | | | | | | |
| I | | | | | | | | |
| J | 44.90 | -1.19 | 37.60 | -0.17 | 42.95 | -0.34 | -0.57 | 0.57 |
| K | | | | | | | | |
| L | | | | | | | | |
| M | 45.30 | -0.79 | 35.21 | -2.57 | 35.91 | -7.38 | -3.58 | 3.58 |
| N | | | | | | | | |
| O | 46.03 | -0.06 | 37.57 | -0.20 | 43.87 | 0.58 | 0.10 | 0.28 |
| Q | 46.14 | 0.05 | 37.45 | -0.32 | 44.80 | 1.51 | 0.41 | 0.63 |
| R | | | | | | | | |
| S | 46.40 | 0.31 | 37.70 | -0.07 | 43.95 | 0.66 | 0.30 | 0.35 |
| MEAN | 46.09 | | 37.77 | | 43.29 | | | 1.38 |
| STDEV | 0.70 | | 0.31 | | 2.28 | | | |



Oil Solvent % (Clean Seed) Average Absolute Difference



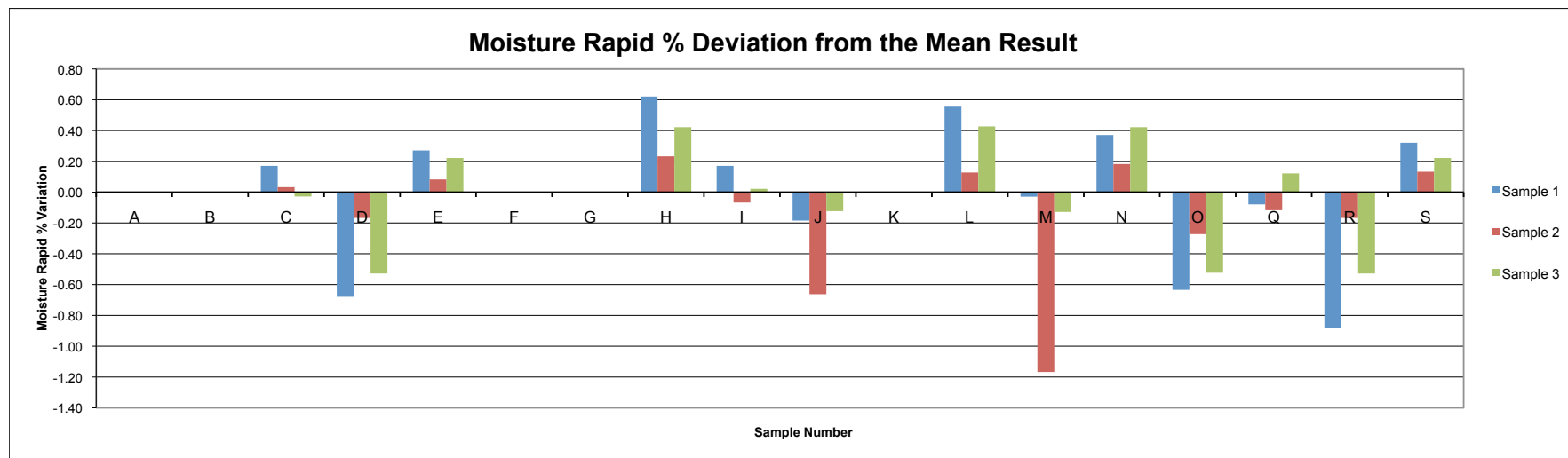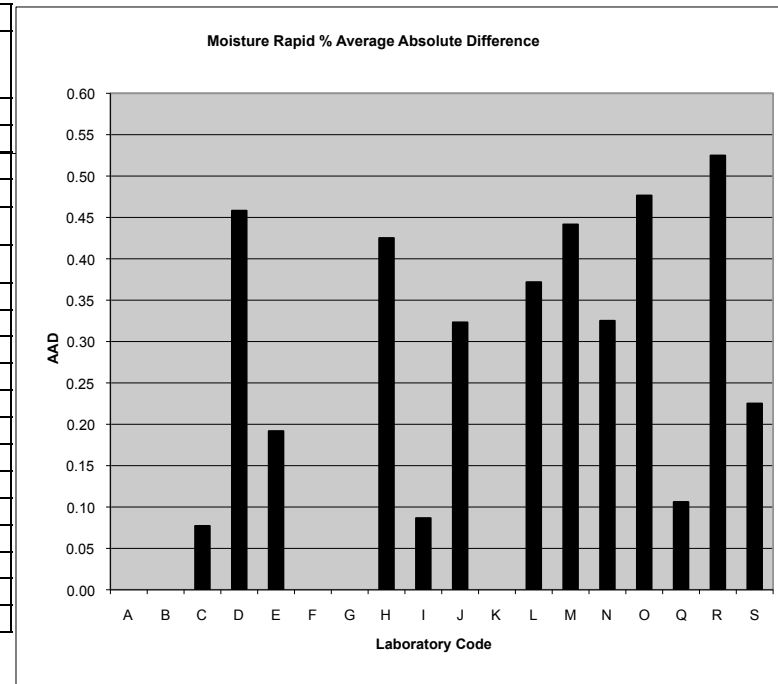Oil Solvent % (Clean Seed) Deviation from the Mean Result

# 2015 AOF Test Check Program
## Round 6 Summary - September

### Moisture Oven % Deviation from the Mean

| Lab | Sample 1 | | Sample 2 | | Sample 3 | | Mean of Differences | Average Absolute Difference |
|---|---|---|---|---|---|---|---|---|
| | Result | S1-Mean | Result | S2-Mean | Result | S3-Mean | | |
| A | 5.66 | -0.12 | 8.02 | -0.03 | 6.87 | -0.17 | -0.10 | 0.10 |
| B | | | | | | | | |
| C | | | | | | | | |
| D | 5.36 | -0.42 | 7.77 | -0.28 | 6.63 | -0.41 | -0.37 | 0.37 |
| E | 5.80 | 0.03 | 8.15 | 0.10 | 7.05 | 0.02 | 0.05 | 0.05 |
| F | | | | | | | | |
| G | | | | | | | | |
| H | | | | | | | | |
| I | | | | | | | | |
| J | 5.98 | 0.20 | 8.57 | 0.52 | 7.29 | 0.26 | 0.33 | 0.33 |
| K | 5.39 | -0.38 | 7.82 | -0.23 | 6.61 | -0.42 | -0.34 | 0.34 |
| L | 5.72 | -0.06 | 8.02 | -0.03 | 6.91 | -0.13 | -0.07 | 0.07 |
| M | 5.75 | -0.02 | 8.13 | 0.08 | 7.06 | 0.03 | 0.03 | 0.04 |
| N | | | | | | | | |
| O | 5.76 | -0.02 | 7.96 | -0.09 | 6.92 | -0.12 | -0.07 | 0.07 |
| Q | 5.66 | -0.11 | 8.18 | 0.13 | 6.99 | -0.04 | -0.01 | 0.09 |
| R | 5.80 | 0.03 | 8.10 | 0.05 | 7.00 | -0.03 | 0.02 | 0.04 |
| S | 5.85 | 0.08 | 8.35 | 0.30 | 7.20 | 0.17 | 0.18 | 0.18 |
| MEAN | 5.77 | | 8.05 | | 7.03 | | | 0.15 |
| STDEV | 0.10 | | 0.17 | | 0.14 | | | |



Moisture Oven % Average Absolute Difference



Moisture Oven % Deviation from the Mean Result

# 2015 AOF Test Check Program
## Round 6 Summary - September

### Moisture Rapid % Deviation from the Mean

| Lab | Sample 1 Result | S1-Mean | Sample 2 Result | S2-Mean | Sample 3 Result | S3-Mean | Mean of Differences | Average Absolute Difference |
|-----|------|---------|------|---------|------|---------|------|------|
| A | | | | | | | | |
| B | | | | | | | | |
| C | 5.95 | 0.17 | 8.05 | 0.03 | 6.80 | -0.03 | 0.06 | 0.08 |
| D | 5.10 | -0.68 | 7.85 | -0.17 | 6.30 | -0.53 | -0.46 | 0.46 |
| E | 6.05 | 0.27 | 8.10 | 0.08 | 7.05 | 0.22 | 0.19 | 0.19 |
| F | | | | | | | | |
| G | | | | | | | | |
| H | 6.40 | 0.62 | 8.25 | 0.23 | 7.25 | 0.42 | 0.43 | 0.43 |
| I | 5.95 | 0.17 | 7.95 | -0.07 | 6.85 | 0.02 | 0.04 | 0.09 |
| J | 5.60 | -0.18 | 7.36 | -0.66 | 6.71 | -0.12 | -0.32 | 0.32 |
| K | | | | | | | | |
| L | 6.34 | 0.56 | 8.15 | 0.13 | 7.26 | 0.43 | 0.37 | 0.37 |
| M | 5.75 | -0.03 | 6.85 | -1.17 | 6.70 | -0.13 | -0.44 | 0.44 |
| N | 6.15 | 0.37 | 8.20 | 0.18 | 7.25 | 0.42 | 0.33 | 0.33 |
| O | 5.15 | -0.63 | 7.75 | -0.27 | 6.31 | -0.52 | -0.48 | 0.48 |
| Q | 5.70 | -0.08 | 7.90 | -0.12 | 6.95 | 0.12 | -0.02 | 0.11 |
| R | 4.90 | -0.88 | 7.85 | -0.17 | 6.30 | -0.53 | -0.52 | 0.52 |
| S | 6.10 | 0.32 | 8.15 | 0.13 | 7.05 | 0.22 | 0.23 | 0.23 |
| MEAN | 5.78 | | 8.02 | | 6.83 | | | 0.31 |
| STDEV | 0.48 | | 0.17 | | 0.36 | | | |



Moisture Rapid % Average Absolute Difference



Moisture Rapid % Deviation from the Mean Result

# 2015 AOF Test Check Program
## Round 6 Summary - September

### Oleic % Oil Deviation from the Mean

| Lab | Sample 1 Result | S1-Mean | Sample 2 Result | S2-Mean | Sample 3 Result | S3-Mean | Mean of Differences | Average Absolute Difference |
|-----|--------|---------|--------|---------|--------|---------|---------------------|------------------------------|
| A | 62.46 | -2.10 | 63.48 | -1.72 | 61.59 | -2.09 | -1.97 | 1.97 |
| B | | | | | | | | |
| C | | | | | | | | |
| D | 63.91 | -0.65 | 64.70 | -0.49 | 63.39 | -0.29 | -0.48 | 0.48 |
| E | | | | | | | | |
| F | | | | | | | | |
| G | | | | | | | | |
| H | | | | | | | | |
| I | | | | | | | | |
| J | | | | | | | | |
| K | 64.75 | 0.19 | 69.94 | 4.75 | 65.20 | 1.53 | 2.16 | 2.16 |
| L | | | | | | | | |
| M | 64.41 | -0.15 | 65.94 | 0.75 | 63.97 | 0.30 | 0.30 | 0.40 |
| N | | | | | | | | |
| O | | | | | | | | |
| Q | 65.38 | 0.82 | 66.15 | 0.96 | 63.91 | 0.24 | 0.67 | 0.67 |
| R | | | | | | | | |
| S | 64.35 | -0.21 | 65.69 | 0.50 | 63.43 | -0.24 | 0.02 | 0.32 |
| MEAN | 64.56 | | 65.19 | | 63.67 | | | 1.00 |
| STDEV | 0.55 | | 1.11 | | 0.31 | | | |



Oleic % Oil Average Absolute Difference



Oleic % Oil Deviation from the Mean Result
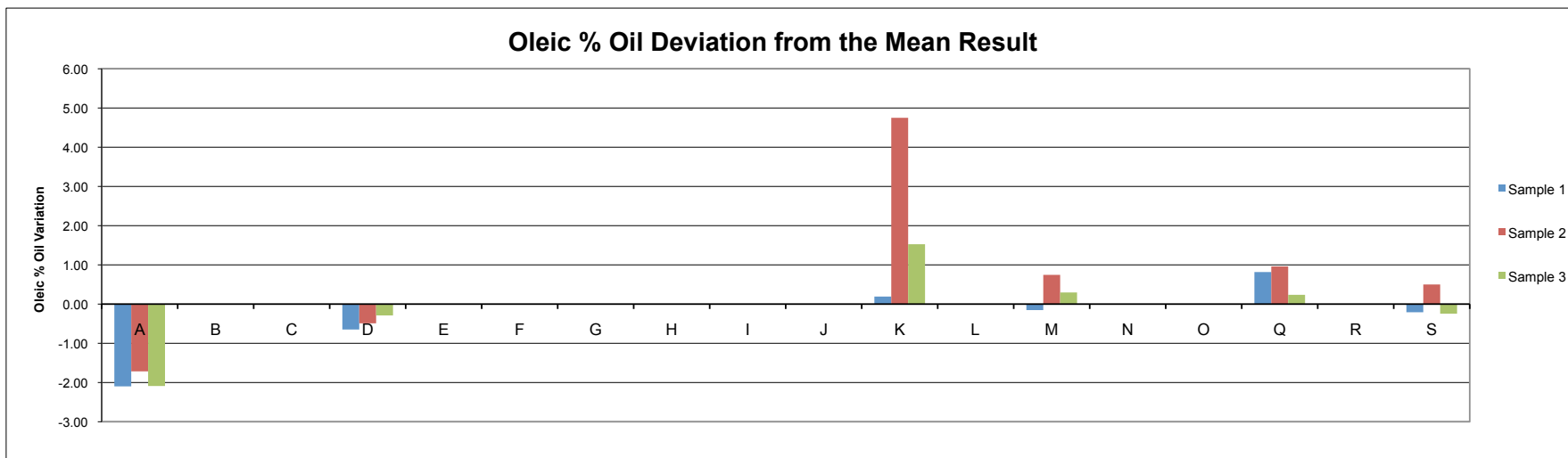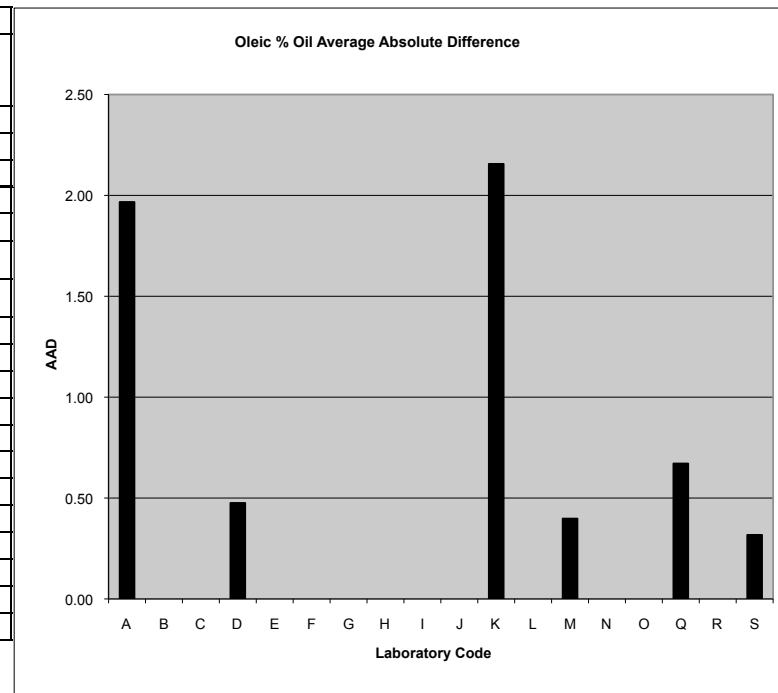
# 2015 AOF Test Check Program
## Round 6 Summary - September

### Linoleic % Oil Deviation from the Mean

| Lab | Sample 1 Result | S1-Mean | Sample 2 Result | S2-Mean | Sample 3 Result | S3-Mean | Mean of Differences | Average Absolute Difference |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| A | 20.84 | 0.62 | 18.30 | 0.58 | 20.64 | 0.80 | 0.66 | 0.66 |
| B | | | | | | | | |
| C | | | | | | | | |
| D | 20.41 | 0.19 | 17.83 | 0.11 | 20.07 | 0.22 | 0.17 | 0.17 |
| E | | | | | | | | |
| F | | | | | | | | |
| G | | | | | | | | |
| H | | | | | | | | |
| I | | | | | | | | |
| J | | | | | | | | |
| K | 19.95 | -0.27 | 15.73 | -1.99 | 18.95 | -0.89 | -1.05 | 1.05 |
| L | | | | | | | | |
| M | 20.10 | -0.12 | 17.19 | -0.53 | 19.45 | -0.40 | -0.35 | 0.35 |
| N | | | | | | | | |
| O | | | | | | | | |
| Q | 19.54 | -0.68 | 17.39 | -0.34 | 19.56 | -0.28 | -0.43 | 0.43 |
| R | | | | | | | | |
| S | 20.49 | 0.27 | 17.90 | 0.18 | 20.40 | 0.56 | 0.33 | 0.33 |
| MEAN | 20.22 | | 17.72 | | 19.84 | | | 0.50 |
| STDEV | 0.38 | | 0.44 | | 0.64 | | | |



Linoleic % Oil Average Absolute Difference



Linoleic % Oil Deviation from the Mean Result
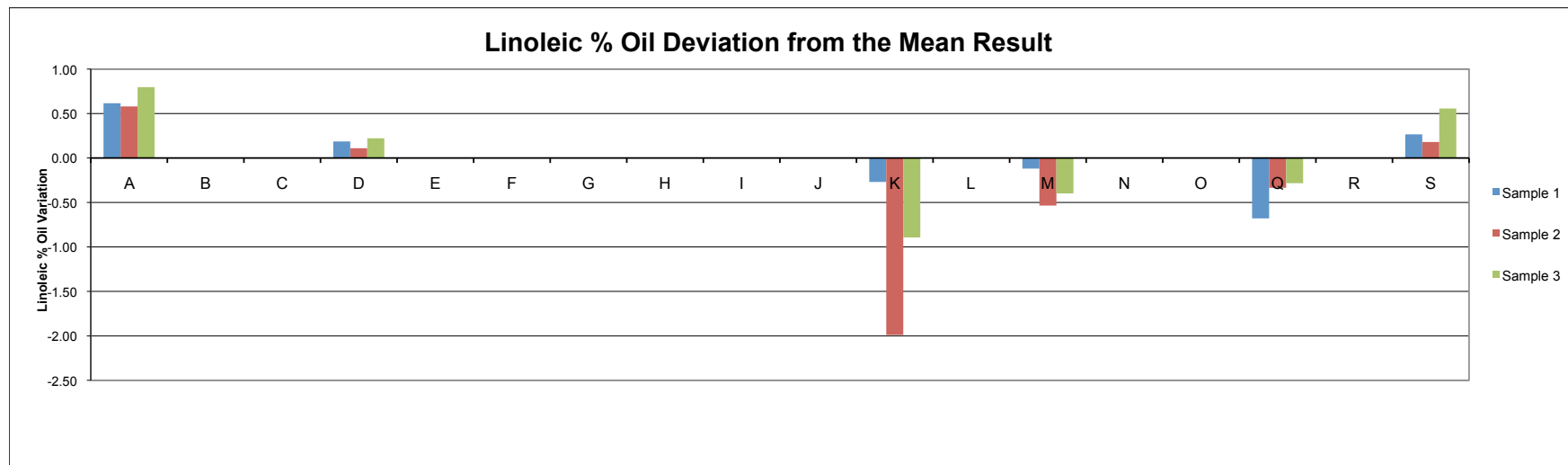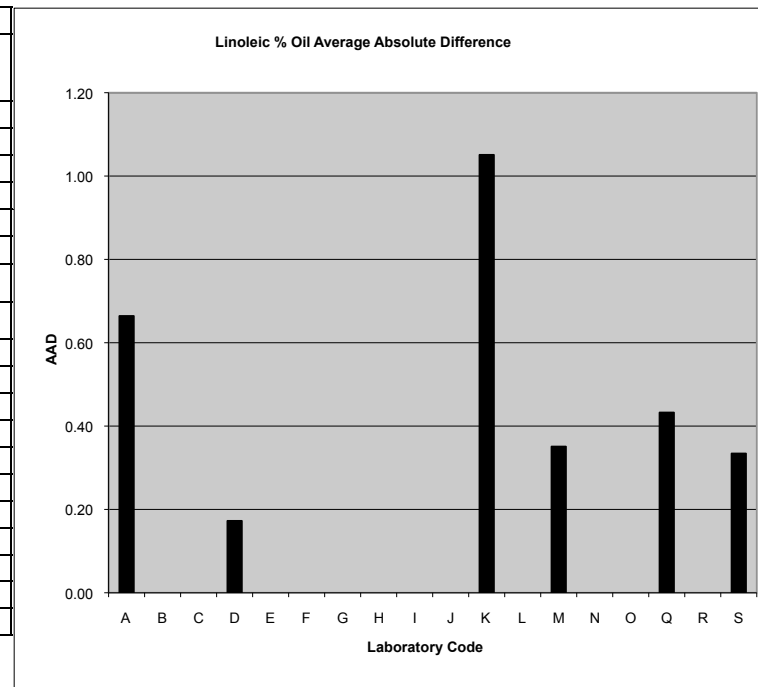
# 2015 AOF Test Check Program
## Round 6 Summary - September

### Linolenic % Oil Deviation from the Mean

| Lab | Sample 1 Result | S1-Mean | Sample 2 Result | S2-Mean | Sample 3 Result | S3-Mean | Mean of Differences | Average Absolute Difference |
|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | |
| B | | | | | | | | |
| C | | | | | | | | |
| D | 8.35 | 2.53 | 8.50 | 2.53 | 8.96 | 2.59 | 2.55 | 2.55 |
| E | | | | | | | | |
| F | | | | | | | | |
| G | | | | | | | | |
| H | | | | | | | | |
| I | | | | | | | | |
| J | | | | | | | | |
| K | 0.40 | -5.42 | 0.55 | -5.43 | 0.36 | -6.02 | -5.62 | 5.62 |
| L | | | | | | | | |
| M | | | | | | | | |
| N | | | | | | | | |
| O | | | | | | | | |
| Q | | | | | | | | |
| R | | | | | | | | |
| S | 8.71 | 2.89 | 8.87 | 2.90 | 9.81 | 3.44 | 3.08 | 3.08 |
| MEAN | 5.82 | | 5.97 | | 6.38 | | | 3.75 |
| STDEV | 4.70 | | 4.70 | | 5.23 | | | |



Linolenic % Oil Average Absolute Difference



Linolenic % Oil Deviation from the Mean Result
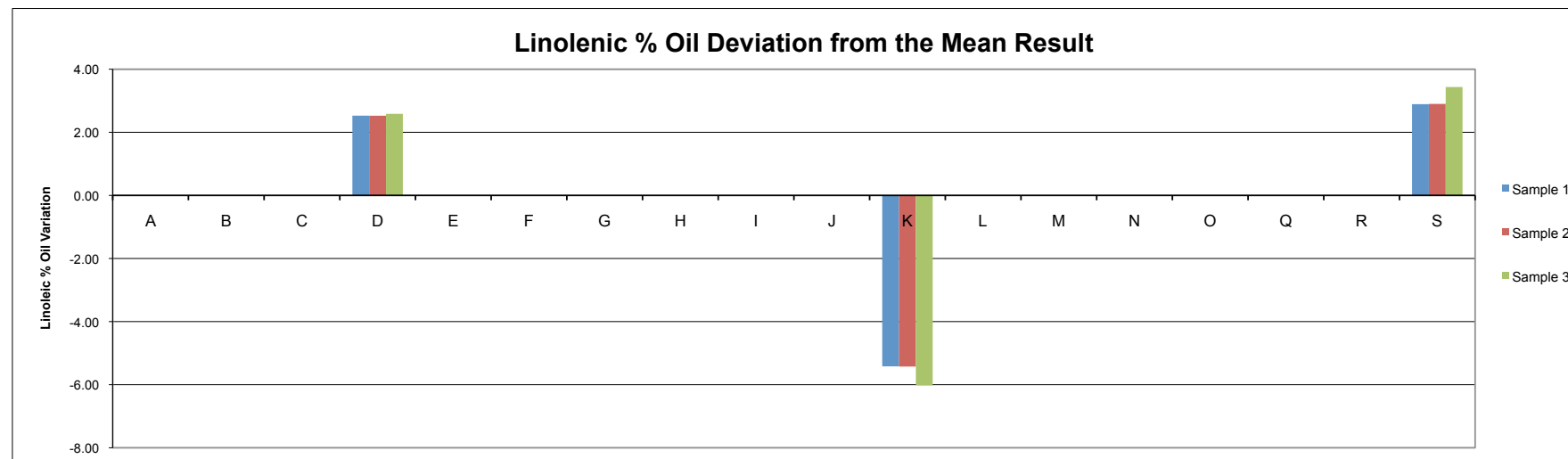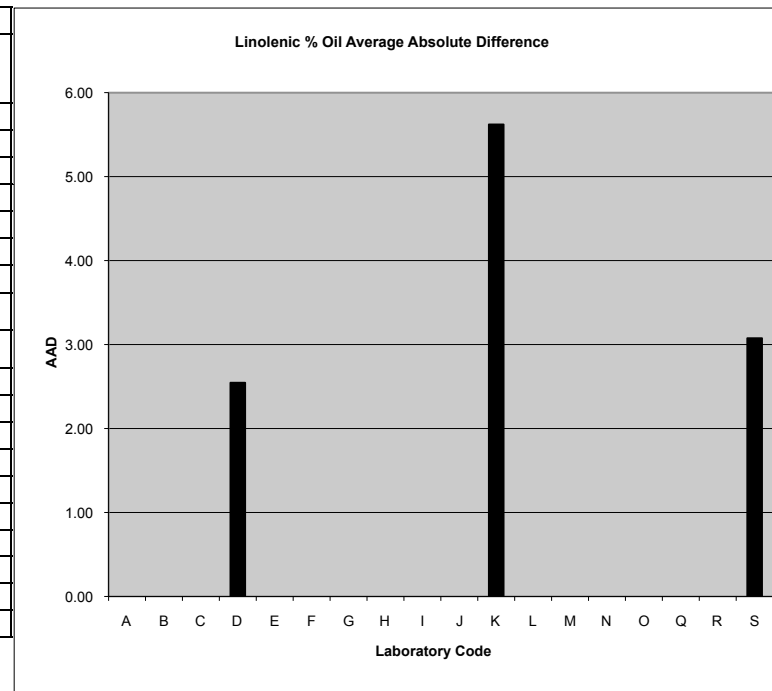
### Free Fatty Acid % Oil Deviation from the Mean

| | Sample 1 | Sample 2 | Sample 3 | Mean of | Absolute |
|---|---|---|---|---|---|

Free Fatty Acid % oil Average Absolute Difference