Practice Calculations

1. A sample of tall fescue is labeled to contain 97.50% pure seed. A purity test is performed and the pure seed percentage is found to be 96.21%.

Which table do you use? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the tolerance for this test? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Does this sample pass? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. A purity was conducted on a sample of standard crested wheatgrass and was found to have a small percentage of multiple florets. Determine the percentages for the purity analysis components:

Single Units: 4.63 grams

Multiple florets: 0.14 grams

Other Crop: 0.10 grams

Inert Matter: 0.20 grams

Weed Seed: 0.03 grams

Final purity percentages: WT. %

Pure Seed: \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Other Crop: \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inert Matter: \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Weed Seed: \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. A 50 gram bulk examination was done on a crimson clover sample with an actual working weight of 50.25. 8 dodder seeds were found. Calculate the number of dodder seeds per pound.

If the sample claims 27 dodder seeds per pound, does it pass?

4. In a 1 gram purity examination of Kentucky bluegrass, with an actual working weight of 1.04 grams, 5 Canada thistle achenes were found. Calculate the number of Canada thistle per ounce.

5. Calculate the weight needed for a purity sample.

|  |  |
| --- | --- |
| Kind | Labeled % |
| Poa pratensis | 38.42 |  |  |
| Festuca arundinacea | 45.65 |  |  |
| Festuca rubra subsp. rubra | 14.23 |  |  |

6. Calculate the percentage of pure seed, other crop, weed seed and inert matter:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Weight in Grams | | |
| White clover | | 30.00 |
| Wheat | | 210.00 |
| Field Pea | | 150.00 |
| Turnip | | 87.00 |
| Other Crop | | 4.00 |
| Weed Seed | | 2.00 |
| Inert Matter | | 17.00 |
| Total |  | | |

7. Calculate the percent of coating material and working weight for the following Kentucky bluegrass sample:

100 coated Kentucky bluegrass = .0400

100 washed Kentucky bluegrass = .0264

Weight of coating material = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

% of coating material = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Recalculated working weight = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Calculate the % annual and perennial ryegrass

Test Fluorescence Level = 83.87%

Pure ryegrass = 98.71%

Variety Fluorescence Level (annual) =92%

Variety Fluorescence Level (perennial) = 3%

9. Calculate the % annual and perennial ryegrass

Test Fluorescence Level = 11.32%

Pure ryegrass = 99.79%

Variety Fluorescence Level (perennial) = 7.19%

10. Calculate Pure Live Seed (PLS)

Pure seed = 97.65

Germination = 62%

Hard = 8%

Dormant = 11%

11. Calculate an 800-seed separation of wheatgrasses

Purity analysis Percent by weight

Pure seed (wheatgrass) 96.30

Other crop seed 0.00

Inert matter 2.80

Weed seed (5 *Bromus rubens*) 0.90

Kind Weight (g)

482 Slender wheatgrass 2.310

306 Bearded wheatgrass 1.880

12 Canada Wildrye .047