

INSTRUCTIONS FOR MICROTRACER (tm) "Mason Jar" TEST- For Feeds Formulated With Microtracers F at 5.5 grams/metric tonne. Updated On 5-24-99

MASH FEEDS:

- 1. Place one sheet of filter paper on the interior surfaces of the magnetic jar lid.**
- 2. Place approximately 65 grams (2 ounces) of feed in the Mason Jar. (The jar should be 1/3 rd full).**
- 3. Screw the magnetic jar lid onto the Mason Jar and shake the jar with lid for about 1 minute, rolling the feed to expose all the feed to the magnetic lid.**
- 4. Unscrew the jar lid and place the lid on a flat surface with the filter paper facing upwards. A grey-black circle of magnetically retrievable material should be on the filter paper.**
- 5. Using an eyedropper, place 10 drops of water or 60% alcohol with one drop ammonia added per 10 mls in the center of the filter paper making certain the circle of magnetic material is thoroughly wetted. Colored spots should appear.**
- 6. Wait one minute, then dry the wetted paper on a pre-heated mug warmer.**
- 7. Place a clean filter paper in the jar lid and repeat the procedure to recover additional tracer (if necessary).**
- 8. Count the spots and mark paper (s) with the identity of the feed tested. One should find about 7 spots from a properly formulated feed with counts ranging from 2 to 12 spots per test.**
- 9. If you expected to find tracer but found none, repeat the test with a new sample. The chances of finding two negative tracer results for a feed formulated with tracer is less than 1%**

Pelleted Feeds:

- 1. Grind the pellets or crumbles to mash and follow the mash testing procedure starting at Step 1.**
- 2. Tracer recovery should average 4 to 5 spots from 65 grams of feed. Spots from pelleted feeds should be nearly as distinct as for mash feeds except for older samples containing added fat. DMSO may be required to develop the tracer spots from such samples.**

NOTE: For extensive routine testing or to obtain more quantitative results, use a "Rotary Detector" magnetic separator. This allows analysis of 300 to 500 gram samples. For further information please Fax Micro-Tracers, Inc. at #415-822-6615.

MICROTRACERS IN FINAL FEEDS

Mason Jar Technique

Materials

1. Scale suitable for weighing 65 grams of feed.
2. Whatman No. 1 filter paper, 7.0cm diameter.
3. Coffee mill or Osterizer.
4. Developing solution (70% ethanol/30% water with 2-5 drops of concentrated ammonium hydroxide per 100ml).
5. Pint mason jar.
6. Special annular magnetic cap.
7. Hot plate or mug warmer.

TEST METHOD

1. Turn on **the hot plate** or mug warmer.
2. Weigh about 65 grams of within of feed (grind feed if in pelleted form)
3. Transfer the feed to the mason jar.
4. Insert filter paper into the magnetic cap and close jar.
5. Shake jar so that all of the sample contacts filter paper within cap. Shake for at least 1 minute.
6. Tap the cap to remove any feed that has adhered to the filter paper Remove the cap and place horizontally with the filter paper visible.
7. Transfer 10-15 drops of the ethanol developing solution to the center of the filter paper. Let the alcohol diffuse outward through the ring of trapped microtracer particles.
8. Remove the filter paper from the cap using a spatula or small knife. Allow the alcohol to evaporate for at least 30 seconds. Then place the filter paper on the heated hot plate or mug warmer.
9. Observe the color on the filter paper for qualitative identification.



