

Aphid breeding in petri dishes

(Protocol modified from IRAC Susceptibility Test Method Series Method No. 019)

Material:

- Petri dish small (diameter 3 cm): bottoms
- Petri dish large (diameter 5 cm): lids with grid
- Agar
- Distilled water
- Schott Bottle
- Forceps
- Leave punch (small or large according to used petri dish) and tray

- 1) If petri dishes were used before, put under UV light for ~20 min.
- 2) Punch leave discs. Store punched leaves on moist paper towel in plastic bag to avoid drying of the leave.
- 3) Prepare 1% w/w agar by mixing agar powder (e.g Fluka BioChemika) with distilled water. Heat until boiling for ~1 min using a microwave (swirl in between, to fully dissolve agar powder). Use a large enough Schott bottle and put the lid on lightly in the microwave. For a small petri dish use ~2.5 ml agar. For a large petri dish use ~10 ml agar.
- 4) Cool down agar by mixing until hand warm. Fill warm agar into the base of the petri dishes to a depth of 3-4 mm (ca. half the depth of the dish).
- 5) Wait for about 3 min (for small petri dishes) until the agar is almost hard. Carefully lay the leave on the agar using the forceps and make sure the leave sticks on the agar (but don't submerge the leave).
The **leave top side** faces the **agar**!
If the agar is already hard, put a little drop of water on the agar and then the leave.
- 6) Wait until the agar has fully cooled before putting the lids on the petri dishes.
- 7) Put animals on the leaves.
- 8) Turn the bottom of the petri dishes upside down and lay on a petri dish lid that has a ventilation grid to avoid fog in the dishes.

