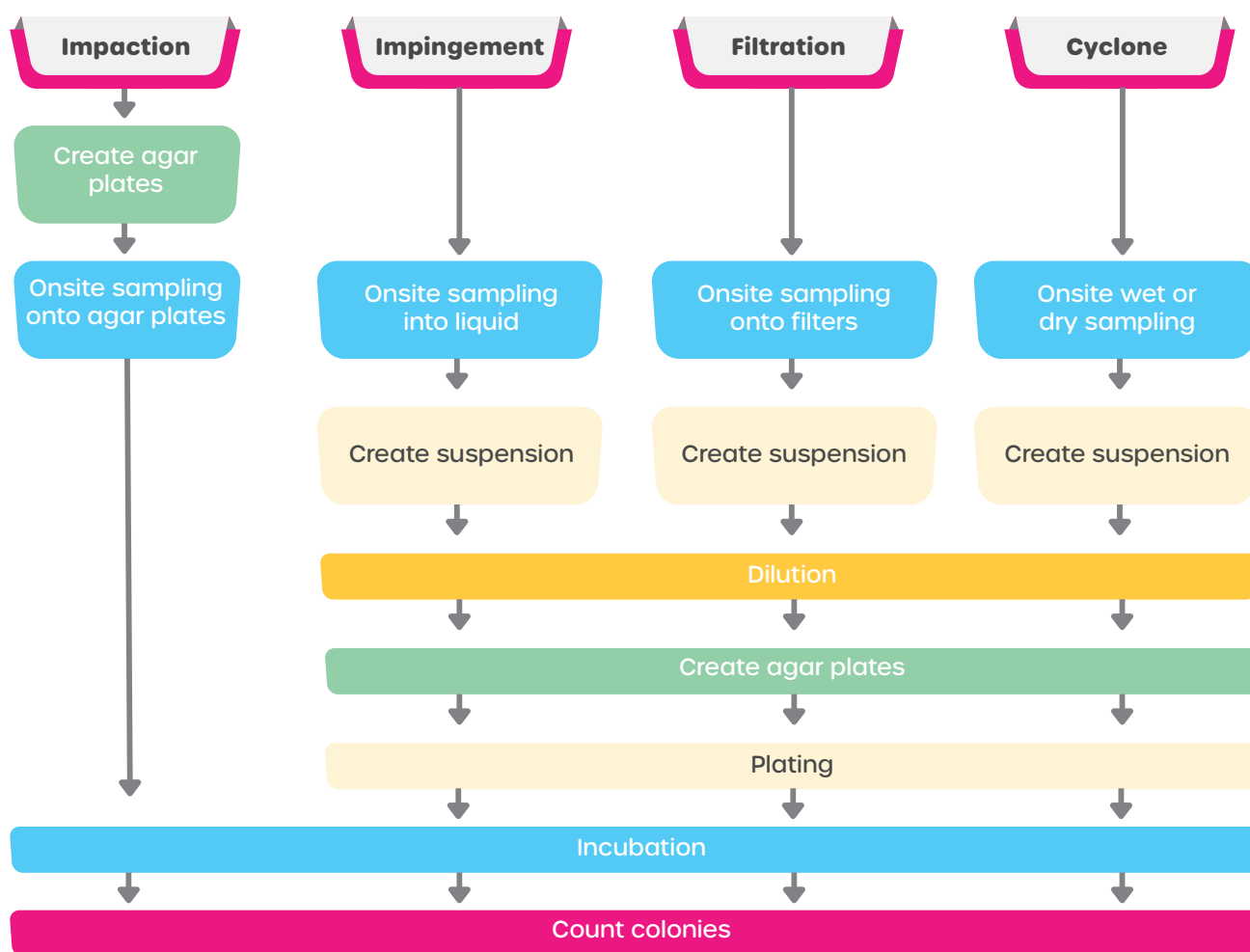


# DIFFERENT ANALYSIS METHODS

There are different post-collection analyses for the quantification and identification of bioaerosols that are available to researchers. These can be broadly categorised as culture-dependent and culture-independent methods. With culture-dependent methods, collected samples are grown on a culture medium (i.e., agar plates) at an appropriate temperature and colony forming units (CFUs) are counted to express the concentration of bioaerosols in CFUs/m<sup>3</sup> (see Figure 1).



It is important to note that culture-dependent methods cannot provide a true quantification of bioaerosols in a collected sample as very few microorganisms are culturable. Hence, efforts have been made to develop new rapid and efficient culture-independent methods to provide the total quantity of bioaerosols in a collected sample. The most widely used are:

- Microscopy (spores, pollen)
- Molecular microbiology (DNA/RNA)



Different culture-independent methods cannot be combined with all sampling methods. The critical factor for the combination is the sample medium, as a liquid medium provides the most analytical options (see Figure 2).

