

RINGWORM IN-SERVICE SUPPLEMENT (DIPS HANDOUT)©

REPORTING FUNGAL CULTURE DATA

- Simple reporting of fungal culture results as “positive” or “negative” is insufficient for proper record keeping, legal issues, and most importantly proper care of the pet. Reports of fungal culture results in the medical record can be reported as “negative” or “positive with identification of the pathogen” provided detailed data is present in the Excel Spreadsheet (see below). The point is that there is a wealth of information that can be obtained from the fungal cultures and it needs to be captured.
- It is optimum to report results as no growth, contaminant growth (add description see below), heavy contamination, or specific identification of a pathogen and an exact count or estimation of the number of colony forming units per plate.
 - No growth: Specifically identifying a plate as no growth may be critical when animals are being treated. Also, if no growth is found yet there is high suspicion that it should have been, this allows for identification of a possible problem. For example, no growth can occur on what should be positive fungal cultures if the sampling culture is poor, the materials are over heated, or there are problems with incubation.
 - Contaminants: It is not necessary to report the genus and species of a contaminant. It is helpful to report the color of the gross colonies and/or if the colony is suspect (pale colony with red color change as it grows) and microscopically examined report what is seen: pigmented colonies, no growth consistent with *Microsporum* or *Trichophyton*, or unsporulated hyphae.
 - Heavy Growth: Often culture plates are swarmed by contaminant growth in the first 7 days depending upon where the animal was prior to the sampling. Heavy growth of contaminants can suppress or hide pathogen growth and it is important to the clinician to know this piece of information.
 - Pathogens: The most important pathogen to recognize is *Microsporum canis*. Recognition of the *Microsporum* genus morphology is important as these are the most important pathogens in small animal practice. *Trichophyton spp* are most commonly isolated from horses, cows, hedge hogs, rats, guinea pigs, and some dogs with very inflammatory lesions. Report *Microsporum* colony growth to genus and species and *Trichophyton spp* to genus (identification to species level often requires sending the specimen out to diagnostic laboratory).
 - Colony Forming Units: If pathogens are identified, the number of colony forming units is important to report as this may determine the course of treatment or be critical in monitoring of treatment. An abbreviation for ‘pathogen score is used commonly by the author’.
 - P-score: This is the pathogen score and corresponds to the number of colony forming units on the plate.
 - 1: <4 colonies on the plate
 - 2: 5-9 colonies on the plate
 - 3: >10 colonies, too many to count colonies or a “swarmed plate”

USE OF AN EXCEL SPREADSHEET IS RECOMMENDED.

- This allows for easy recording of data on a weekly basis, tracking of fungal culture results, sorting and searching, and cost capture. (CTRL-f will bring up search function).
- This form of recording of data becomes critical when animals are under treatment.
- This can be arranged on a continuous sheet or via month.
- Fungal culture results are entered into a simple column spread sheet and data recorded using standard comments and abbreviations.
- A centralized location of data allows for rapid reporting to staff veterinarians and clients.
- A centralized location of data allows for easy and rapid back tracking if needed.
- The number of fungal culture plates purchased versus the number of plates used and charged to clients can easily be tracked.

Example

	Results	Final	DC	DI	Wk 1	Wk 2	Wk3	P score	Comments

Key to Abbreviations and Explanation of Use

- DC: date cultured-date the pet was sampled
- DI: date the fungal culture was set up, in most cases DC and DI will be same
- Wk 1, Wk2, Wk 3: Record results of fungal culture examination during the appropriate week or after 7, 14, or 21 days. If a culture is heavily contaminated or culture positive, report results in the appropriate week. In other words, if cultures are examined daily and are culture positive 10 days after culture, report that within week 2. Otherwise report readings at 7, 14, and 21 days.
 - Abbreviations
 - C-contaminant growth
 - HC-heavy contaminant growth (if this occurs in the first week notify staff doctor that a re-culture may be indicated)
 - Ng-no growth
 - *M. canis*, *M. gypseum*, *Trichophyton* (*Microsporum canis*, *Microsporum gypseum*, *Trichophyton* are the most common pathogens). Recommend highlighting text in RED to make for easy recognition on the spread sheet.
- Results: Use the above abbreviations (NG, C, HC, or ID the pathogen)
- Results Final: Results are finalized after 21 days so this column will have an “N” in the column from the first read of the culture until finalized at day 21.
- P-score: This is the pathogen score and corresponds to the number of colony forming units on the plate.
 - 1: <4 colonies on the plate
 - 2: 5-9 colonies on the plate
 - 3: >10 colonies, too many to count colonies or a “swarmed plate”
- Culture comments: place to list comments such as lesions on pet, findings on the plate (e.g. exact number of cfu)