

January 30th, 2006

Re: Analysis of Synthetic Turf

Samples from two fields were received. They were tested for total Aerobic Plate Count (Bacteria) and Total Fungi Count (Mold).

Each sample of up to 10.0 grams was aseptically diluted into sterile phosphate buffer water. Total Plate Counts were prepared into serial dilutions and plated onto TSA media. Counts for Yeast & Mold were plated onto MEA+ Chloramphenicol agar and were counted after five (5) days. APHA Standard Methods were used for detection and Enumeration of target microorganisms and at recommended dilutions.

Summary of Sample Results		Bacteria	Yeast / Mold
Sample	Test	72hr Results (CFU/g)	5 day Results (Y&M CFU/g)
#4675 CBC	Total Aerobic Count	14,000,000	-
	Total Yeast & Mold Count	-	95,000
#4676 Green	Total Aerobic Count	22,000,000	-
	Total Yeast & Mold Count	-	2,200,000
#4677 Black Media	Total Aerobic Count	16,000,000	-
	Total Yeast & Mold Count	-	960,000
#4729 Eagle Mid	Total Aerobic Count	400	-
	Total Yeast & Mold Count	-	<100
#4730 Eagle Off	Total Aerobic Count	1,500	-
	Total Yeast & Mold Count	-	<100

Example: 960,000 Colony Forming Units per gram of material

Comment: Levels of 1,000,000 CFU are the levels of Bacteria, Yeast and Mold that are expected in very active garden dirt. There may be dangerous species in these samples. Also, the higher the number of CFU on the material, the possibility of dangerous organisms is higher.

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Diversity index of Fungi (Mold) from each Sample

Table of data indicates approximate percentage of each fungi strain in each sample

Strain ID #	4675	4676	4677
#1	0	3	0
#2	0	13	8
#3	0	13	14
#4	7	19	22
#5	0	33	26
#6	0	15	28
#7	0	4	3
#8	19	0	0
#9	11	0	0
#10	22	0	0
#11	4	0	0
#12	15	0	0
#13	15	0	0
#14	7	0	0

Conclusions:

1. Items #1 through #7 are associated with yeast types
 - a. Sample #4676 and #4677 are from the same field and showed the same results regardless of the media tested.
 - b. Treating the field will require treatment of the entire media.
2. Item #8 through #14 are associated Fungi
 - a. This is an outdoor field and showed mold types similar to outdoor mold.
3. Sample #4729 & 4730 appear to be very clean and may represent a treated surface.
4. We suggest that next step to test these same samples with your cleaning products to confirm that the material will kill or eat these organisms.

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Photo of # 4676



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Sample #4677



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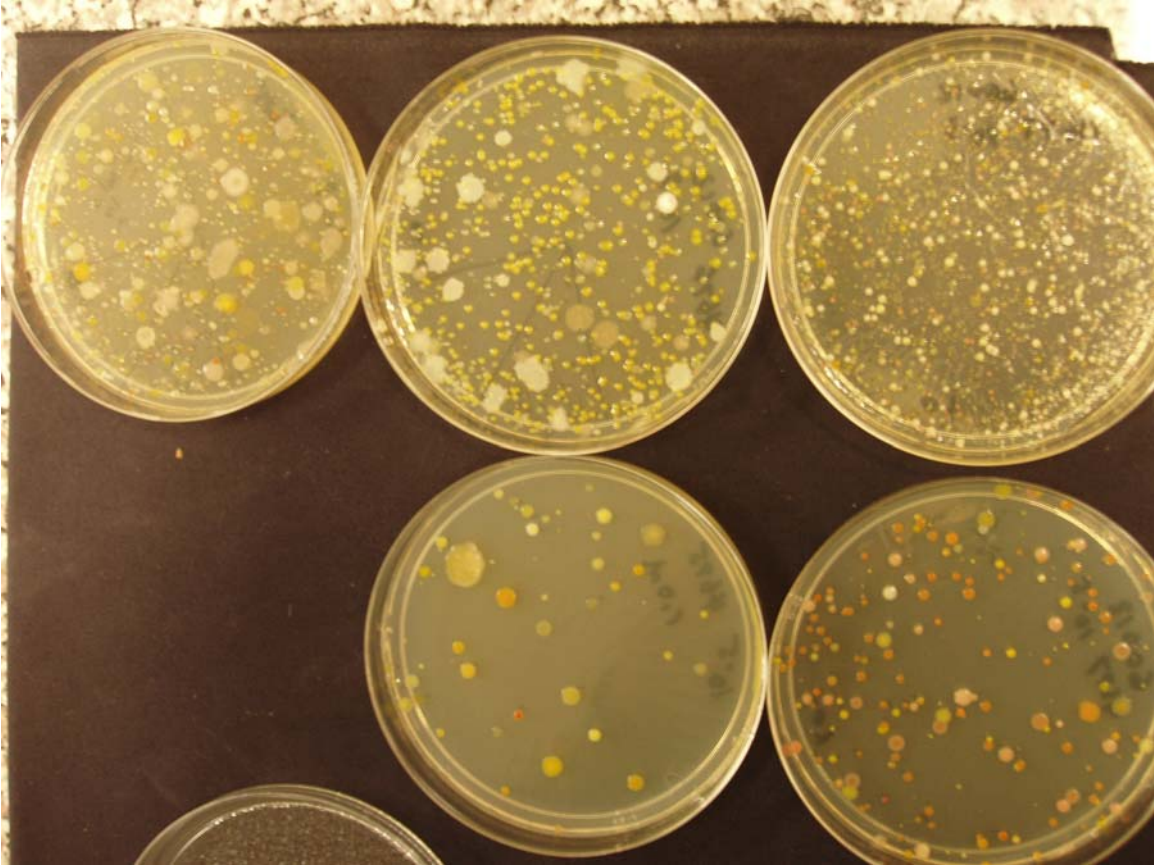
Photo of all Mold Count Plates



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Photo of Aerobic or Bacteria Count Plates



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Calculation of the required liquid needed to treat a Football Field.

Length 140 yards 420 feet

Width 50 yards 150 feet

Depth of liquid 1/64 inch = 1/768 foot = .0013 foot

Depth of liquid 1/32 inch = 1/384 foot = .0026 foot

Depth of liquid 1/16 inch = 1/192 foot = .0052 foot

$L(\text{ft}) \times W(\text{ft}) \times D(\text{ft}) \times 6.8 \text{ Gal/ft}^3 = \text{TG}$

TG = Total Gallons of Solution Required for a specific depth of application.

$420\text{ft} \times 150\text{ft} \times .0013 \text{ ft} \times 6.8 \text{ Gal/ft}^3 = 1,115 \text{ Total Gallon of Solution}$

Mix application formula

.5 oz Concentrate per gallon Solution = .0039 Gal Concentrate per Gallon of Solution

1.0 oz Concentrate per gallon Solution = .0078 Gal Concentrate per Gallon of Solution

$\text{TG} \times \text{GC/GS} = \text{Total Gallons of Solution}$

$1,115 \text{ GS} \times .0039 \text{ GC/GS} = 4.3 \text{ GC (Gallon of Concentrate) at .5 oz}$