

HOW TO USE THE LITMUS AMMONIA MONITOR

New, Low Cost, Easy to Use Solutions for Ammonia Level Maintenance



PPM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
10	4	4	4	5	5	5	5	6	6	7	7	7	8	8	9	9	9	10	10	11	11	12	12	13
20	6	6	6	7	7	7	8	8	9	9	10	11	11	12	12	13	13	14	14	15	16	16	17	17
30	7	7	8	8	9	10	11	11	12	13	13	14	14	15	15	16	17	17	18	18	19	20	21	22
40	8	9	9	10	11	12	12	13	14	15	16	16	17	17	18	19	20	21	21	22	23	24	25	25
50	9	10	11	12	13	13	14	15	16	17	18	19	19	20	21	22	22	23	24	25	26	26	27	28
60	10	12	12	13	14	15	16	17	18	19	20	21	21	22	23	24	25	26	27	28	29	29	30	31
100	13	14	15	16	17	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

6 STEPS TO USING LAI



- 1. OPEN LAM**
- 2. MARK LAM**
- 3. HANG LAM**
- 4. RETRIEVE LAM**
- 5. INTERPRETING LAM RESULTS**
- 6. FILE LAM**

Step 1 - OPEN LAM

**OPEN LAM INSIDE THE ANIMAL HOUSING TO PREVENT
PREMATURE EXPOSURE TO AMMONIA**



**USE A PIN KNIFE OR SIMILAR TOOL TO OPEN LAM'S
PROTECTIVE PACKAGING**

Step 2 - MARK YOUR DATA ON LAM

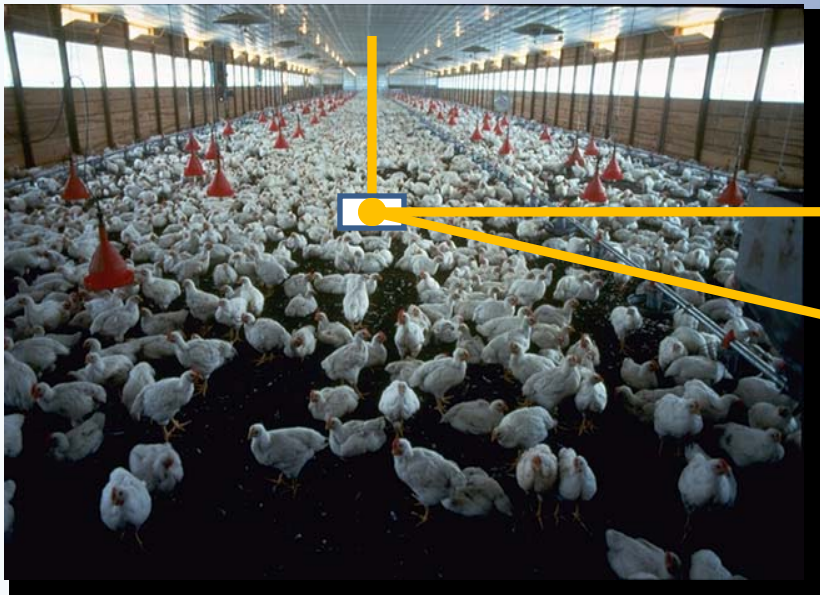
litmus

- Date Placed
- Time Placed
- Time Removed
- Total Hours Used
- Grower Name
- House Number
- Other helpful information
 - Time
 - Temperature
 - Humidity
 - Timer Settings
 - Etc.



Step 3 - HANG LAM

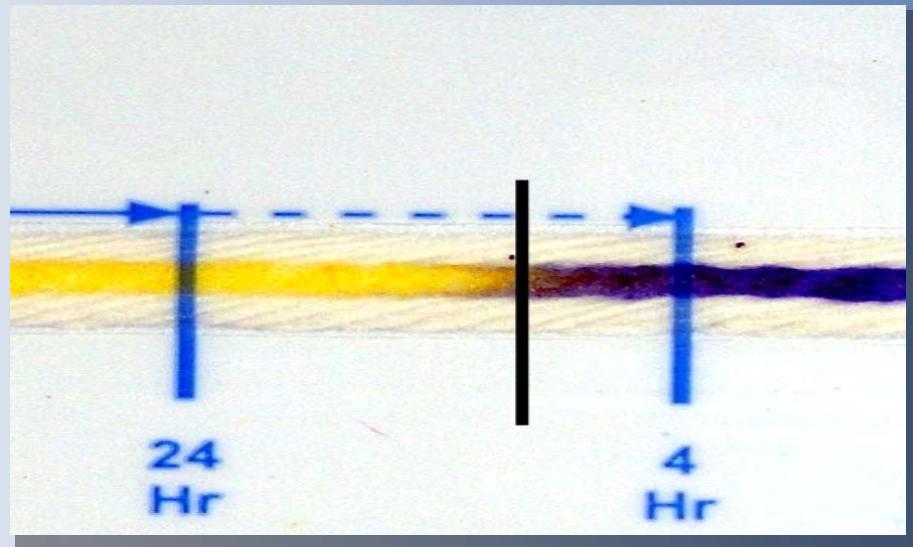
- Attached a cord to an overhead structure
 - Mid house or other
- Attach a large clip to the cord



- Adjust the clip to animal head height
- Attach marked LAM

Step 4 - RETRIEVE LAM

- Anytime during a 24 hour period
- Mark LAM where the color change becomes solid blue



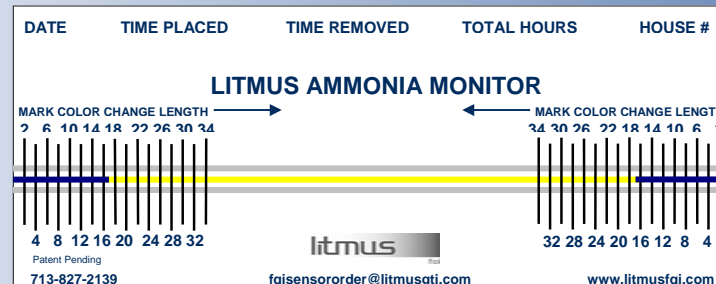
- Record time removed and TOTAL HOURS USED

Step 5 - INTERPRETING LAM RESULTS



Each LITMUS AMMONIA MONITOR (LAM) has a colorimetric indicator which changes color from yellow to blue at specific rates depending on ammonia levels. Numbers on the LAM Indicator show the color change length.

EXAMPLE: COLOR CHANGE LENGTH = 17



Single or multiple Ammonia Indicators are placed in various locations in a Poultry House and used to average from 1 to 24 hours.

A chart is provided to give the average ammonia level by comparing the TOTAL HOURS USED with the number indicating the Color Change length.

EXAMPLE: TOTAL HOURS USED = 10, COLOR CHANGE LENGTH = 17, AVERAGE PPM = 50

PPM

PPM	TOTAL HOURS																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
10	4	4	4	5	5	5	5	6	6	7	7	7	8	8	9	9	9	10	10	11	11	12	12	13
20	6	6	6	7	7	7	8	8	9	9	10	11	11	12	12	13	13	14	14	15	16	16	17	17
30	7	7	8	8	9	10	11	11	12	13	13	14	14	15	15	16	17	17	18	18	19	20	21	22
40	8	9	9	10	11	12	12	13	14	15	16	16	17	17	18	18	19	20	21	21	22	23	24	25
50	9	10	11	12	13	13	14	15	16	17	18	19	19	20	21	22	22	23	24	25	26	26	27	28
60	10	12	12	13	14	15	16	17	18	19	20	21	21	22	23	24	25	26	27	28	29	29	30	31
100	13	14	15	16	17	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

Note: If adjustments are made to control ammonia, the Litmus Ammonia Indicator should be replaced.

Step 6 - FILE LAM FOR PERMANENT RECORDS

■ Small File Box or Filing Cabinet



■ A Spreadsheet

Grayson Farms Ammonia Level Averages Records - House #1

Date	Grower	House #	Average Ammonia PPM	Time Placed	Time Retrieved	Total Hours	Color Change MM	Timer Settings, etc
2/11/2010	Gray	1	45 ppm	1:00 PM	3:30 PM	2.5	7	x.xx
2/12/2010	Gray	1	40 ppm	8:00 AM	8:00 AM	24	25	x.xx
2/13/2010	Gray	1	40 ppm	8:12 AM	5:30 PM	9+	14	x.xx

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