

Dear Potential Customer:

When placing an order for Ammonia Indicators with LITMUS FQI, LLC, please observe the following guidelines:

1. Complete a Customer Information and Payment Sheet and sign before an order can be placed. Once this form has been completed, unless changes need to be made, it will not need to be re-done.
2. LITMUS Ammonia Indicators are \$3.00 each with a minimum order of 100 indicators or 1 carton.
3. Orders under \$500.00 must be charged on a credit card in advance before the order can be shipped.
4. Orders priced above \$500.00 may be charged on a credit card or on credit. Credit must be approved before the order is shipped.
5. Quantity discounts are available on large purchase orders, please contact Grayson Upchurch at (770) 967 3000 for more information.
6. Orders will be shipped UPS and a shipment and handling fee will be charged for each order.
7. Applicable sales taxes will be charged unless purchaser provides a tax exempt certificate.

If you have any questions, answers may be found on our website at www.litmusfqi.com, by emailing fqisensororder@litmusfqi.com or by calling 713-827-2139.

Thank you for your interest in LITMUS Ammonia Indicators.

Sales Order Form

From

Customer No.
Terms
Salesperson
Ship Week Of

Ship To

Order #	Delivery Via	Routing
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Item	Quantity Ordered	Description	Unit Count	Unit Price	Total
Total					

Special Notes

	Purchaser	
	Title	
	Approval Signature	Date

LITMUS AMMONIA INDICATOR INFORMATION

INTRODUCING THE NEW LITMUS AMMONIA INDICATORS (LAI)

LAI is the first tool to give poultry growers an inexpensive and easy to use method to consistently monitor ammonia levels over a 4 hour or 24 hour period.

In order to maximize the potential for LAI, it is imperative that the industry understands the intended functions of LAI and how to use LAI properly before testing begins.

INTENDED FUNCTIONS

The LAI indicator is intended for daily use to help judge the **average daily ammonia level** in your poultry house around a preferred target. The targets are: 25 PPM, recommended by the US national Chicken Council and the 50 ppm as requested by US growers.

LAI is designed to offer readings to help growers judge the average daily level of house ammonia above, on or below a preferred average target.

The averaging feature of the LAI offers growers a more useful method to judge house "adjustments". The LAI is lower cost and more effective in maintaining ammonia levels than a "point in time" measurement.

Farm managers or technicians, requiring "quick reads" before placement, may have growers place the LAI's the day before (or 4 hours before) the technician arrives. This determines the average daily ammonia level before bitty placement and early grow-outs.

USING LAI

Remove LAI from the protective packaging when **inside** the poultry house to prevent premature ammonia exposure.

- **Write** any appropriate information on the LAI: Grower, Time, Date, House number, Past days ammonia levels, adjustments made, etc.
- A fine tip magic marker is best and permanent.
- **Place** LAI in the house. Bird head height is preferred. Hang by nails &/or clips. Placement is not critical due to averaging feature of LAI.

In 4 hours (or) in 24 hours

- **Mark** the LAI at the end of the color change. This will provide a permanent record for the daily ammonia level. Put the days data on your spreadsheet.
- **Remove** the used LAI from the house. NOTE – The color change has "momentum" and will continue to move after removal from the house. Marking the length of color change will give actual readings.

Interpreting the data is very easy.

4 hour average level

- If the color change is below or on the target, no adjustments are necessary.
- If the color change is above the target, adjustments to house should be made.

24 hour average level

- If the color change is below or on the target, no adjustments are necessary.
- If the color change is above the target, adjustments to house should be made.

Judging the amount of adjustments

- Below or on the 4 or 24 hour mark – No adjustments necessary.
- Slightly above the 4 or 24 hour mark – Small adjustments necessary.
- Well above the 4 or 24 hour mark – Larger adjustments necessary.
- Above the 4 hour mark in 1 – 3 hours – Larger adjustments may be necessary.

Trends

Necessary adjustments may be determined by close examination of accumulated spreadsheet data. Successful adjustments from past days may be duplicated to achieve the preferred results.

WHY SHOULD AMMONIA LEVELS BE CONTROLLED?

- Numerous studies have shown that ammonia concentrations over 20 ppm, reduce weight gains, increase feed conversions, decrease bird uniformity and yield as well as increase susceptibility to disease.
- Birds raised in 25 ppm vs 50 ppm can weight up to 25# more. Larger birds mean more income.
- A healthier environment for you
- Less air pollution and happier neighbors.

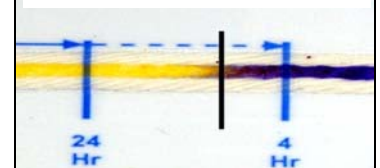
25 PPM AND 50 PPM LAI

The LAI is used for 4 or 24 hour readings.

The targets of 25 ppm or 50 ppm daily average is indicated by 2 target points available on your LAI.

- The 4 hour target will give a quick read to help with establishing pre-placement and early grow-out ammonia levels. This gives the grower a method to establish ammonia control methods in a short time period.
- The 24 hour target will give the grower a long term daily average of ammonia levels around the preferred target.

MARK LAI WHERE COLOR CHANGE IS SOLID BLUE



ORDERING LAI

LAI is packaged in 20 count packages. Minimum order is 100 (or 1 master package). Orders may be placed by visiting www.litmusfqi.com

Personal Assistance – Help with use, interpretation and ordering is always available:

- 713 827 2139 or chase@litmusfqi.com
- 770 967 3000 or gupchurch@litmusfqi.com