## Norlab Inc. - Fluorescent Red Tracer Dye Products
### Technical Data Sheet

<table>
<thead>
<tr>
<th>General Properties</th>
<th>Liquids</th>
<th>Powders</th>
<th>Strips</th>
<th>Tablets</th>
<th>Tracer Dye Bag</th>
<th>Donuts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dye Family</strong></td>
<td>Rhodamine WT</td>
<td>Rhodamine WT</td>
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<tr>
<td><strong>CAS Number</strong></td>
<td>3520-42-1</td>
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<td>3520-42-1</td>
<td>3520-42-1</td>
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<tr>
<td><strong>Visual Detectability</strong> (Note: Varies with field conditions)</td>
<td>Visual/UV &lt; 100ppb</td>
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</tr>
<tr>
<td><strong>Maximum Absorbance Wavelength</strong> (Spectrophotometer)</td>
<td>556 nm</td>
<td>556 nm</td>
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</tr>
</tbody>
</table>

*If checking in the visual spectrum, simply set the spectro for the “Absorbance Wavelength” for detection of peak wavelength.*

| **Excitation Wavelength** **|** | **360 nm** | **360 nm** | **360 nm** | **360 nm** | **360 nm** |
| **Emission Wavelength** | **377 nm** | **377 nm** | **377 nm** | **377 nm** | **377 nm** | **377 nm** |

**If utilizing a black light or fluorometer, these lights will emit at 360 nm. At this "Excitation Wavelength", if the dye is present, I will give a peak at the respective "Emission Wavelength" listed.**

| **Dispersement Time** | Immediate | < 8 minutes | < 5 minutes | < 8 minutes | < 8 minutes | 3-5 hours |
| **Aqueous Appearance** (Depends on concentration) | Red to Bright Pink | Red to Bright Pink | Red to Bright Pink | Red to Bright Pink | Red to Bright Pink | Red to Bright Pink |
| **Dry Appearance** | Liquid-Dark Red | Fine Powder-Dark Red | Strip-Dark Red | Tablet-Dark Red | Fine Powder in Water Soluble Bag-Dark Red | Wax Donut-Dark Red |
| **Absorption Resistance** | Most Suspended Matter | Most Suspended Matter | Most Suspended Matter | Most Suspended Matter | Most Suspended Matter | Most Suspended Matter |

**Dosage (Note: Visible to Naked Eye)**
- 1 oz Liquid Dye: 800 gallons
- 1 lb Dye Powder: 12,000 gallons
- 1 Dye Strip: 500 gallons
- 1 Dye Tablet: 80 gallons
- 1 Tracer Dye Bag: 3,000 gallons
- 1 Dye Donut: 8,000 gallons
- 1 oz Liquid Dye: 8,000 gallons
- 1 lb Dye Powder: 120,000 gallons
- 1 Dye Strip: 5,000 gallons
- 1 Dye Tablet: 800 gallons
- 1 Tracer Dye Bag: 30,000 gallons
- 1 Dye Donut: 80,000 gallons

**pH (Note: No significant change between 8.5-11 pH)**
- 10.5 +/- 0.5 @ 25°C
- 10.5 +/- 0.5 @ 25°C
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- 10.5 +/- 0.5 @ 25°C
- 8.6 +/- 0.5 @ 25°C

**Specific Gravity**
- 1.15 +/- 0.5 @ 25°C

**BOD (Biochemical Oxygen Demand) Studies**
- Dye biodegradability with 60% of the available oxygen consumed in 7 days.

This information is furnished without warranty, representation, inducement, or license expressed or implied, except that it is accurate to the best of knowledge of the manufacturer/supplier. The data on this sheet is related only to the specific material designated herein & the information available for all ingredients at the time of creation.

Manufacturer/supplier assumes no responsibility for use or reliance upon this data. Any information withheld herein (such as exact identity or exact concentration) has been reserved as a trade secret as per applicable regulations. Customers are encouraged to conduct their own tests & to read the SDS carefully prior to use. The suitability of these products for any specific application should be evaluated by industry professionals.

**CAUTION:** As with any dye or chemical, the use of gloves & goggles is recommended when handling this product. Contact with skin may cause irritation &/or staining. Keep out of reach for children & pets.

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