

# Mercaptan Detector Strips

Technical Note

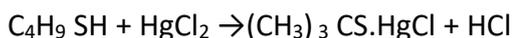
## INTRODUCTION

Mercaptan detector strips are a simple and cost effective method of detecting mercaptan at its TLV concentration in the environment or in any chemical plant that uses or produces mercaptan.

## HOW IT WORKS

These are paper strips impregnated with a sensing chemical by a special process to detect mercaptan in air. These strips are originally yellow in colour and on exposure to mercaptan turn to pink. The time it takes to change its colour is related to the concentration of mercaptan in the air. It provide a semi-quantitative method of detection of mercaptan in air in the range of 0.5 to 10 ppm. These strips of 7 X 1 cm are bound in a booklet of 20 strips each.

## CHEMICAL REACTION



## HOW TO USE THESE STRIPS IN THE FIELD

Tear out one strip from the booklet and place it in the measurement area. If the air contains mercaptan, the detector strip changes its colour from yellow to pink. Note down the time it takes to change colour from yellow to pink. The concentration is inferred from the mercaptan sensitivity table given below. For example, if it takes 5 minutes to change the colour from yellow to pink the mercaptan concentration is 5 ppm. Whereas if it takes two minutes to change the colour the concentration is 10 ppm.

## MERCAPTAN SENSITIVITY TABLE

Concentration of Mercaptan in ppm	Exposure Time	Colour Change
0.5	50 minutes	Yellow – Light pink at edges
1	25 minutes	Yellow – Pink
2	12 minutes	Yellow – Pink
5	5 minutes	Yellow – Pink
10	2 minutes	Yellow – Pink

As Hydrogen sulphide (H<sub>2</sub>S) has cross sensitivity to these strips it cannot be used in the presence of this gas for the measurement of mercaptan.

**Note:** Do not carry the detector strips box into a mercaptan environment. This may lead to exposure of all detector strips to mercaptan.