

# Mercaptan Detector Strips

Technical Note

## INTRODUCTION

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

## DISCUSSION

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 turns them to pink. The time it takes to change its colour is related to the concentration of mercaptan. The detection range of this strip to mercaptan is 0.5 to 10 ppm.

These strips are made in the form of a booklet being 7 cm long and 1 cm in width. Each booklet consists of 20 strips.

## WORKING PRINCIPLE

The reaction of mercaptan with the sensing chemical in the strip changes the colour of the strip. The time it takes to change the colour is related to the concentration of the mercaptan in the air. It is used as a semi-quantitative method of detection of mercaptan in air.

## 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. The time it takes for the colour change depends on the concentration of gas present in that area. For example, if the mercaptan concentration is 5 ppm, it takes five minutes for the colour to change from yellow to pink, where as it takes only two minutes, for the colour change when the mercaptan 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

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