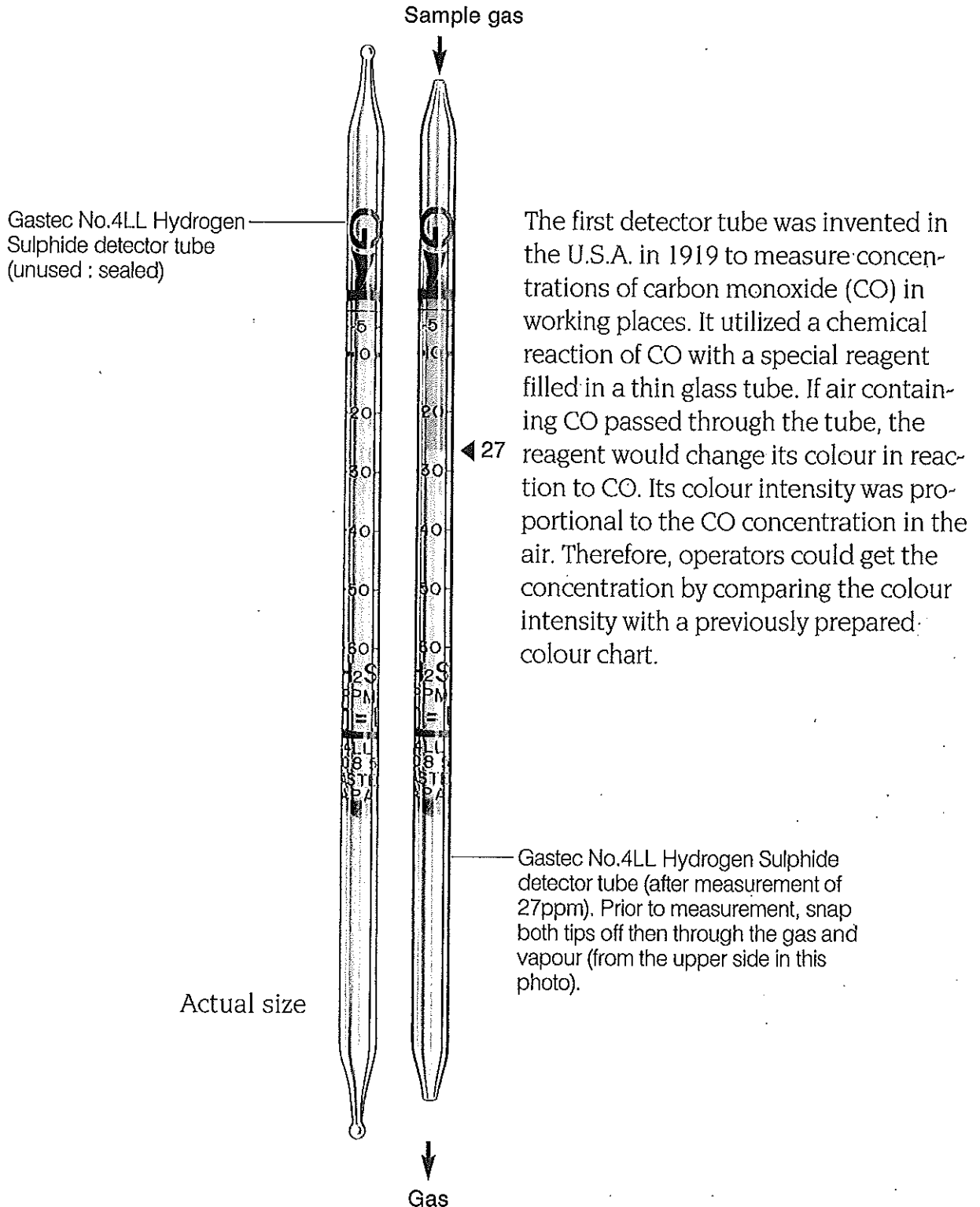


What is the detector tube method?



The first detector tube was invented in the U.S.A. in 1919 to measure concentrations of carbon monoxide (CO) in working places. It utilized a chemical reaction of CO with a special reagent filled in a thin glass tube. If air containing CO passed through the tube, the reagent would change its colour in reaction to CO. Its colour intensity was proportional to the CO concentration in the air. Therefore, operators could get the concentration by comparing the colour intensity with a previously prepared colour chart.

This method provided a lot of advantages over laboratory analysis methods that used to require complicated equipment, specialists to operate, and a long time to get the results. The detector tube method permits a simple, quick, and economical analysis at the working sites. Today, this technology has been widely applied to measure concentrations of a huge variety of substances, with great improvements in measurement accuracy, reagent stability that contributes to prolonged shelf life of detector tubes, and the means of concentration reading. Some independent testing agencies have been established to certify the quality of detector tubes.

In 1970, Gastec developed Japan's first direct reading detector tubes that indicate concentrations directly on calibration scales printed on the tubes. Now operators can quickly get concentrations by simply reading the scales on the tubes without referring to colour charts. At Gastec, we have been endeavouring toward the research and development of the highest quality detector tubes for analysing not only airborne gases and vapours but also pollutants in the ground and water. Our efforts have won a high reputation among our customers in almost all sectors of the society. As of July, 2011, more than 500 kinds of Gastec detector tube applications have been introduced.