

Breath Alcohol Measurement with Alcotest[®]-Tubes

System for Per mille Limit Value Measurement.

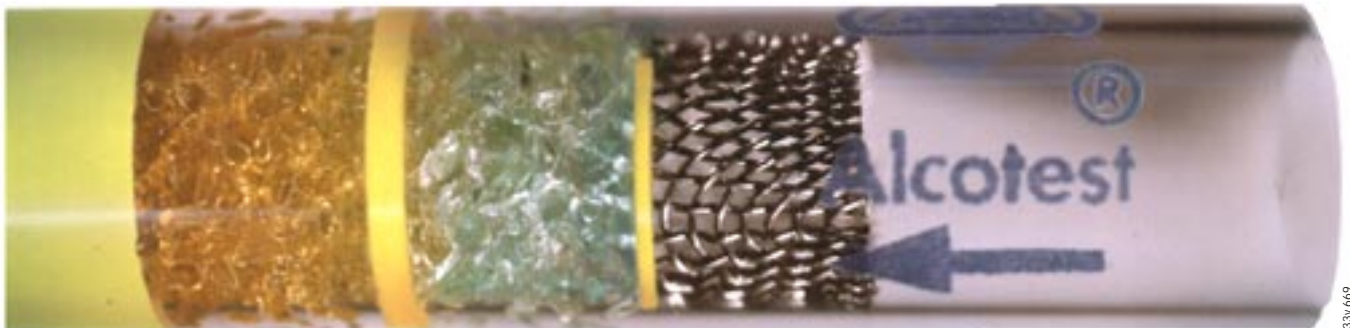
Use

A considerable weight of evidence exists to indicate that the consumption of alcohol may impair the judgement and reduce the efficiency of drivers of vehicles. From both the legal and the analytical standpoints it is necessary for Police and Traffic Control Authorities to be in a position to relate the effects of alcohol consumption to traffic offenses.

A simple way of examining the degree of intoxication is by performing a breath alcohol test. Sophisticated electronic breath testers are already introduced for evidential breath alcohol analysis in several countries. Other countries still use blood or urine analysis for evidential purposes. In both cases, the equipment necessary for the legal test can hardly be taken in the field. Thus, simple and reliable screening testers should be used on the road, which give the traffic officer an indication, whether the legal limit of alcohol in blood is exceeded or not. Dräger-Alcotest is such a handy screening tester.



Alcotest Tube,
reaction zone –
magnification x 5



Design and measuring principle

A package of Dräger Alcotest-Tubes contains 10 indication tubes, 10 mouthpieces and one breathing bag. Each indication tube and each mouthpiece can be used for one breath test.

For performing the breath test, the tips of the hermetically sealed indication tube are opened; the tube is then connected to the breathing bag and the mouthpiece in such a way that the arrow, which is printed on the tube, points to the breathing bag. The person to be tested now inflates the bag by exhaling in one breath through the indication tube. If alcohol vapour is present in the exhaled breath, the yellow indication layer present in the Alcotest tube turns green; the discoloration zone being dependent on the breath alcohol concentration.

Immediately after alcohol has been taken a relatively high alcohol concentration is present in the mucous membranes of mouth and throat and in the saliva as well. This »mouth alcohol« would provide a falsely high breath

alcohol concentration, when the breath test is performed within 15 minutes after the last drink. After a waiting period of at least 15 minutes the »mouth alcohol« has disappeared and the true breath alcohol concentration can be measured.

Evaluation of test results

Dräger-Alcotest gives a measure of the alcohol concentration in blood of the subject at the time of the test. The test results can be read from the tube as follows: On the indication tube an annular ring is imprinted.

When, in case of using the Alcotest CH 222, the green discoloration zone reaches the annular ring, it can be assumed that the alcohol concentration corresponds to 0.5‰ B.A.C.

When, in case of using the Alcotest CH 237, the green discoloration zone reaches the annular ring, it can be assumed that the alcohol concentration corresponds to 0.8‰ B.A.C.

When, in case of using the Alcotest 80 CH 199, the green discoloration zone exceeds the annular ring, it can be assumed that the alcohol concentration exceeds 0.8‰ B.A.C.

Advantages to the user

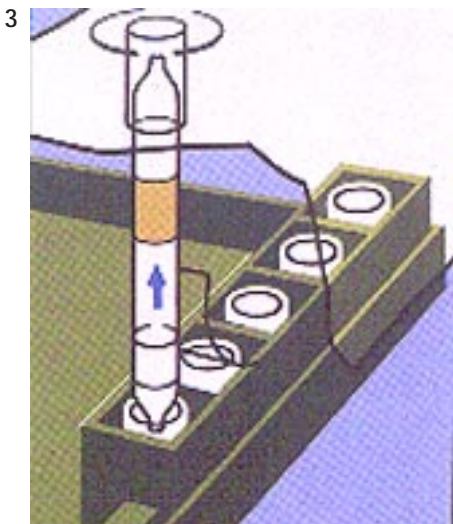
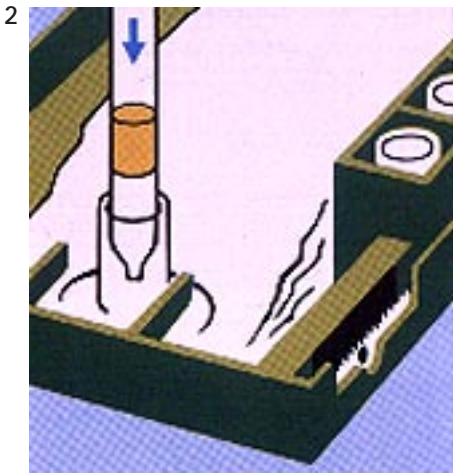
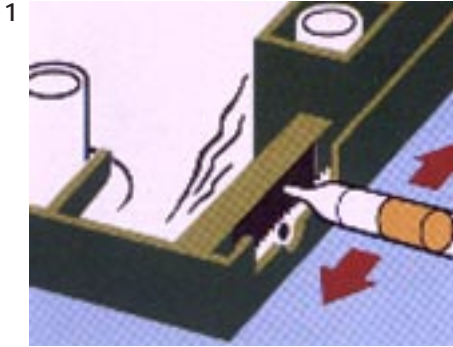
- low-cost measuring-method
- small and handy
- fast and reliable in use
- result cannot be manipulated
- legally approved

Approvals

Alcotest 80 CH 199
Approved by e.g. the Secretary of State for the Home Office and the Secretary of State for Scotland for the purpose of the Road Safety Act 1967.

Alcotest CH 237
Approved for use by police forces of e.g: Germany, the Netherlands, Belgium.

Alcotest CH 222
Approved for use by police forces of the Netherlands, Australia, Norway.



How to use Alcotest Tubes

Picture 1

Take an Alcotest tube from the packet. Hold the tube near the end to be opened. Scratch the end on the saw. Then break it off in the snap hole provided. Repeat the procedure on the other end.

Picture 2

Insert tube into the collar of the empty measuring bag with the marking arrow pointing towards the bag.

Picture 3

Remove the protective paper from the set of mouthpieces. Extract a mouthpiece (this is most simply done by using the free end of the tube). Push the tube firmly into the mouthpiece. (When removing the tube, hold measuring bag on connector only).

Picture 4

The subject being tested blows through the mouthpiece and tube into the measuring bag until it is fully inflated.



unopened tube

used tube

Order list

Description	Order Code
Dräger-Alcotest (0.8‰) Pack of 10 indication tubes, 10 mouthpieces and 1 breathing bag	CH 199
Dräger-Alcotest (0.8‰) Pack of 10 indication tubes, 10 mouthpieces and 1 breathing bag	CH 237
Dräger-Alcotest (0.5‰) Pack of 10 indication tubes, 10 mouthpieces and 1 breathing bag	CH 222

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DrägerService

Dräger equipment must always be fully functional and safe in operation. DrägerService offers a regular inspection service and is rapidly available in the event of malfunction. Your equipment is back in operation on the spot. DrägerService enhances the vital flow of information between client and manufacturer.

Dräger Expertise

Dräger has had an outstanding reputation for solving problems in the field of human breathing since 1889. Dräger has been constantly involved in the handling of gases, in particular hazard protection, and the saving of life in medical and industrial emergencies. Many of the company's 7500 employees are active in research and innovation to ensure that the latest techniques and scientific advances are fully tested before their inclusion in equipment.

Dräger Worldwide

The sales and service organisation is spread throughout the world. It comprises more than 20 subsidiaries and hold companies to ensure that Dräger is always within easy reach of its clients and in close contact with all important markets. Its constantly rising market share underlines the company's international competitiveness and strength.

Dräger has subsidiaries in the following countries:

Australia, Austria, Belgium, Brazil, Canada, Denmark, France, Great Britain, India, Japan, Netherlands, Norway, Singapore, South Korea, Spain, Sweden, Switzerland, USA.

Additionally, Dräger is widely represented in North, Central and South America, Africa, the Middle East, the Far East and Eastern Europe.



The Quality Management System of Dräger Safety Division has been certified i.a. according to DIN EN ISO 9001 and is recognized by numerous German and international organizations.