



C3.6.2 AIR ANALYTICS

C3.6.2.1 Continuous measurement of carbon dioxide concentration in the classroom

Continuous measurement of carbon dioxide concentration in the classroom (C3.6.2.1)

Cat. No.	Description	C3.6.2.1
524 013	Sensor-CASSY 2	1
524 220	CASSY Lab 2	1
524 083	CO ₂ sensor S	1
501 11	Extension cable, 15 pin	1*
524 0673	NiCr-Ni adapter S, type K	1
529 676	Temperature probe, NiCr-Ni, 1.5 mm, type K	2
	additionally required: PC with Windows XP/Vista/7/8/10 (x86 or x64)	1

* additionally recommended

The air all around us contains mainly nitrogen and oxygen. But the other substances, the ones which occur in significantly lower concentrations - in the ppm range (ppm = parts per million) or even less - are precisely the ones which can be harmful to humans. These are studied in air analyses.

One of the challenges here is the low concentration of the substances. In addition, the analysis of gases requires more complex instrumentation and is less easily accessible than the analysis of liquids.

In this context, it is worthwhile to study the interiors of classrooms or seminar rooms, where it is particularly important to maintain optimal air conditions, in order to facilitate the learning process.

In experiment C3.6.2.1, the carbon dioxide concentration in the classroom is studied for a period of one week. At the same time, the temperature is measured at two positions, e.g. on the radiator and in the classroom. In a room full of people, the CO₂ concentration rises rapidly above 1 %, and simply letting some air in can hardly lower it to the value in the atmosphere.