

babyCompact™ Smokerlyzer®



Breath carbon monoxide (CO) tester for antenatal care



scientific contributions to health

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Bedfont Scientific have been recognised as world leaders in the market of exhaled breath monitors for over twenty years. Today, they have used this knowledge to develop and manufacture a breath CO monitor specifically for pregnant women.

The babyCOmpact is a small and affordable tester that can be used as part of your everyday screening at all antenatal appointments. Displaying the damaging CO levels within the mother's blood can create the opportunity for discussing whether she would like to quit smoking, or requires extra help. Using the chart opposite, the babyCOmpact will also show foetal carboxyhaemoglobin levels (%FCO_{Hb}) – the amount of CO transferred from the mother to her unborn child¹. Even if the mother does not smoke, routine monitoring with the babyCOmpact at antenatal visits will highlight any boiler or heater malfunctions that could be poisoning the family by leaking CO.

¹Expired air carbon monoxide concentration in mothers and their spouses above 5ppm is associated with decreased foetal growth, Conchita Gomez, Midwife, Ivan Berlin, M.D, Ph.D. Pierre Marquis, M.D. and Michel Delcroix, M.D Preventive Medicine 40 (2005) 10–15



Interpreting the reading

Carbon monoxide in the breath is measured in parts per million (ppm).

The babyCOmpact Smokerlyzer gives 7 levels of reading, each level representing a range of ppm. Once established this range can be converted into %FCOHb to highlight the effects of smoking on the unborn foetus.¹

Readings

	ppm range	
	>51ppm	Dangerously Addicted Smoker
6	36-50ppm	Heavily Addicted Smoker
5	26-35ppm	Addicted Smoker
4	21-25ppm	Frequent Smoker
3	11-20ppm	Smoker
2	6-10ppm	Danger Zone
1	0-5ppm	Non-smoker

Technical Specification

Concentration range:	0-50ppm
Display:	6 LEDs
Detection principle:	Electrochemical sensor
Accuracy (repeatability of readings):	± 5% of full scale
Hydrogen cross-sensitivity:	<10%
Battery life:	2 years/700 tests* (not replaceable)
Response time:	Typically <20 seconds to 90% FSD
Operating temperature range:	0-40°C (Storage 0-50°C)
Operating humidity:	10-90% (Storage 0-95%) non-condensing
Sensor operating life:	2 years, 6 month product warranty
Sensor sensitivity:	1ppm
Dimensions:	Approx. 33 x 50 x 116 mm
Weight:	Approx. 100g including batteries
Construction:	Case – Polycarbonate/ABS blend

*whichever is soonest

Consumables

Bedfont Scientific supply a range of consumables to complement your babyCOmpact Smokerlyzer. It is recommended that you use Bedfont consumables for optimum performance from your monitor.

Flatpak Mouthpieces

These mouthpieces take up less than a tenth of the space of normal cardboard mouthpieces and can easily be carried around. They are also packed in batches of 25 to reduce handling and the risk of cross-infection and are available in boxes of 50 or 250. It is essential that a new mouthpiece is used for every test carried out.



D-pieces

The D-piece is used to attach the Flatpak mouthpiece to the tester and incorporates a one-way valve and infection control filter, proven to remove and trap >99.9% of airborne bacteria². The D-piece should be changed at least once a month or sooner if visibly soiled.

² Health Protection Agency (HPA), Porton Down, Report No 43/06, pp.10-11



Instrument Cleansing Wipes

Bedfont provide instrument cleansing wipes for the instrument and external D-piece surfaces. Cleaning products containing alcohol should never be used, as they could affect the accuracy of the instrument. It is recommended that wipes are used for one surface only.

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