



References

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**For more information about v-TAC
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The new alternative to arterial blood gas

*The v-TAC software calculates arterial blood
gas values from peripheral venous blood,
supplemented with arterial oxygen saturation
(SpO₂) measured by pulse oximetry*

Arterial blood gas values from a venous blood sample

v-TAC software works seamlessly with the existing blood gas analysers from leading manufacturers

The v-TAC software calculates arterial blood gas values from peripheral venous blood, supplemented with arterial oxygen saturation (SpO₂) measured by pulse oximetry



Benefits from application of v-TAC



In emergency settings, blood sample for venous blood gas can be combined with routine blood sampling removing the need for separate punctures



Easy access to blood gas testing may release time and enables potential work-flow improvements where the task of blood gas testing may be transferred from doctor/specialist to other staff groups, such as nurses¹



The use of venous blood may enable closer monitoring of patients with respiratory compromise in non-ICU settings²



May reduce the need for arterial blood samples leading to less patient pain and fewer side effects¹



v-TAC in clinical practice

It is very simple to operate v-TAC in daily clinical practice.³ The software works seamlessly with your existing blood gas analyser, and after implementation, the operational workflow is as follows:

- 1 Draw a peripheral venous blood sample and measure arterial oxygen saturation (SpO₂) simultaneously with a pulse oximeter
- 2 Insert the venous blood sample into the blood gas analyser and enter the measured SpO₂ value to start the analysis. The exact operation of the blood gas analyser depends on the actual brand and type
- 3 The v-TAC software calculates arterial blood gas values, which instantly becomes available to the clinician on a printed report (optional) and in the electronic patient record

Validation of v-TAC

v-TAC has been validated in several performance validation studies.^{1,2,4} The study population includes a broad range of patients from emergency departments, pulmonary departments and intensive care units with various diagnoses, including COPD, sepsis, asthma, pneumonia and lung cancer. v-TAC is validated on haemodynamically stable patients treated with, e.g. non-intensive ventilation (NIV) and oxygen therapy.

IT architecture and operation

The v-TAC software is not installed on the blood gas analyser itself. Instead, the v-TAC software is a stand-alone software application designed to run on a small footprint Windows virtual server or a dedicated computer in the hospital's IT environment. A single instance of the v-TAC software can service all blood gas analysers in the hospital. During normal operation, the v-TAC software operates seamlessly as a black-box and does not require any attention or application management.³