

The ARTP Certificate of Competence in Blood Gas Sampling and Analysis

In recent years the number of health care professionals, other than doctors, taking blood gas samples, either by arterialised capillary or arterial sample, has gradually increased. Although nationally agreed standards have been published for the performance of arterial sampling and analysis, staff performing these tests are not always aware of the standards or the competencies to which they should be working. Staff are often not formally trained in the procedure and have not been assessed in the practical competences and skills frequently fall way below the acceptable standard. It is vitally important that all blood gas sampling and analysis is performed to recognised standards to ensure accurate and reliable results.

To ensure that patients are appropriately investigated and monitored the Association for Respiratory Technology and Physiology (ARTP) have developed a Certificate of Competence to demonstrate the proficiency of practitioners to perform such measurements.

The ARTP Certificate of Competence in Blood Gas Sampling and Analysis has been introduced to demonstrate a recognised standard for those practitioners who complete the Blood Gas Certificate program.

Aim and format of the program:

To provide a competence based assessment for the measurement of blood gases by arterial/arterialised capillary samples

The assessment consists of the following elements:

- 1) *Portfolio of evidence*
- 2) *Log book*

On registration for the Certificate, you will be sent your registration number and guidelines for completion of the portfolio and logbook.

You will have six months to complete the logbook and submit the portfolio.

When the logbook and portfolio have been completed, they should be submitted to the ARTP Administrator will arrange for them to be assessed. Extensions will only be granted under serious circumstances and must be made at least 4 weeks before the submission date. Only one extension is allowed and candidates must apply to the Administrator in writing before a decision is made.

Completion of a short blood gas training course or evidence of appropriate work-based experience approved by the Assessment Committee is required before the blood gas programme can be undertaken.

ARTP Blood Gas Certificate Registration fees:

£60.00

To register for the ARTP Blood Gas Certificate of Competence, please complete and return the enclosed form with your payment to:

ARTP Administration (Blood Gases)
Suite 4, Sovereign House,
22 Gate Lane,
Boldmere
Sutton Coldfield,
West Midlands. B73 5TT

Tel/fax: 0845 226 3068



ARTP CERTIFICATE IN BLOOD GASES
APPLICATION FORM

First Name:

Surname:

Address for correspondence:

Tel No:

E-mail:

Job title:

Professional Qualification:

Blood Gas Training (if attended)

Please enclose fee (Cheques made payable to ARTP) and send to:

ARTP Administration (Blood Gas)
Suite 4, Sovereign House
22 Gate Lane, Boldmere
Sutton Coldfield, West Midlands, B73 5TT
Tel/fax: 0845 226 3068 Email: admin@artp.org.uk

How would you like to receive the log book/portfolio pack?

By post

By e-mail

DISCLAIMER

All individuals that are undertaking The ARTP Certificate of Competence in Blood Gas Sampling and Analysis should read the disclaimer below.

The ARTP Certificate of Competence in Blood Gas Sampling and Analysis has been developed to demonstrate an individual has achieved a recognised standard. However, ARTP **does not** accept liability for the practice of certified individuals during the sampling of blood gases. In no event shall ARTP be liable for any direct, indirect, incidental, punitive, or consequential damages of any kind whatsoever with respect to the practice of certified individuals during the sampling of blood gases.

All candidates undertaking the ARTP Certificate of Competence in Blood Gas Sampling and Analysis should ensure that their employer is aware of their proposed change in practice BEFORE they commence their supervised practice. If individuals do not have personal professional liability insurance, they should ensure that their employer is willing to accept liability for their actions should there be a clinical incident.

I declare that have read and understood the disclaimer issued by ARTP regarding Blood Gas sampling.

It is advised that you retain a copy of this declaration for future reference. A copy signed by a representative of ARTP will be returned to you with your candidate pack

SIGNED: _____
(Candidate)

PRINT: _____

DATE: _____

SIGNED: _____
(On behalf of ARTP)

PRINT: _____

DATE: _____

PORTFOLIO CONTENTS

All candidates are required to complete a portfolio in the workplace to provide evidence of the background to the performance of blood gas measurements. This forms part of the assessment requirements. You will also be required to identify a Work Based Mentor (WBM) to support and supervise you through your training period. This person should be a registerable health care professional who currently performs either arterial or capillary blood gas sampling, depending on which blood gas sampling procedure you are training in. It is desirable that your chosen WBM also have a qualification in assessment, education or training. You must submit the CV of your chosen WBM(s) to the ARTP Blood Gas Training Registrar for confirmation of suitability prior to commencing your Clinical Practice Logbook

Your portfolio should consist of the following sections. All pages in the portfolio should be numbered and recorded on the contents page so the assessor can easily locate them.

- 1) Contents page
- 2) Your CV
- 3) Information about your Worked Based mentor/mentors (WBM's):
 - a) *Name*
 - b) *Workplace*
 - c) *Job role*
 - d) *Main assessors qualification*
 - e) *Number of years performing blood gases*
- 4) Background information about your workplace to include: -
 - a) *Local arrangements for blood gas sampling*
 - b) *Method of referral e.g. clinics or ad hoc basis*
 - c) *Number of tests done and the type of patients you are testing, e.g. outpatient clinics, inpatients, LTOT*
 - d) *Where the tests are performed and the type of staff performing the tests, e.g. doctor, nurse, clinical physiologist or other.*
- 5) Performance criteria.
These are the standards you will be assessed against and are sent to you in your candidate pack.
- 6) A detailed blood gas sampling protocol.
With the aid of diagrams and pictures as required, describe the procedure you use for taking blood gas samples, including all consumables used.
- 7) An outline of the blood gas analyser used.
With the aid of diagrams and pictures describe the type of blood gas analyser used and the way in which it operates. Include quality control methods and procedures.

CLINICAL PRACTICE LOGBOOK CONTENTS

All candidates are required to complete a Clinical Practice log in the workplace to collect evidence of performance of blood gas measurements. This forms part of the assessment requirements.

This logbook consists of 3 sections for all candidates and is a record of all of the blood gases you have observed and performed whilst under the supervision of a suitably qualified person. This evidence should be gathered during your normal working practice.

1) Section 1: Record of observed practice.

The candidate must observe and record a **MINIMUM of 10** samples being performed by a competent practitioner. They should be recorded on Evidence Sheet 1 and both the candidate and the Practitioner should sign off each observation. It should be noted that there is a minimum of 10 observations. However, candidates may wish to undertake more observed practice before they begin their supervised practice.

2) Section 2: Record of supervised and corrected practice

All assessments should be numbered and recorded on the evidence summary sheet so the assessor can easily locate them.

- a) For candidates performing arterialised capillary blood gas sampling, there should be **20** samples directly observed and corrected by a named WBM (mentoring), each of which is recorded on a separate assessment sheet. This may be reduced for candidates who have previous experience.
- b) For candidates performing arterial blood gas sampling, there should be **10** samples directly observed and corrected by named WBM (mentoring), each of which is recorded on a separate assessment sheet. This may be reduced for candidates who have previous experience.

3) Section 3: Record of supervised practice

All assessments should be numbered and recorded on the evidence summary sheet so the assessor can easily locate them.

- a) For candidates performing arterialised capillary blood gas sampling, there should be **20** procedures signed off by a nominated WBM (to ensure competence in practice). This may be reduced for candidates who have previous experience. Competence may be demonstrated by the acquisition of **5** consecutive, successful samples within the 15 signed off procedures.
- b) For candidates performing arterial blood gas sampling, there should be **10** signed off by a nominated WBM (to ensure competence in practice). This may be reduced for candidates who have previous experience. Competence may be demonstrated by the acquisition of **3** consecutive, successful samples within the 10 signed off procedures.
- c) Where problems have been encountered:
 - i) Describe the problem and reflect on how this might be avoided in future.
 - ii) Include at least three examples in your logbook.

Evidence Sheet 1- Record of observed practice

Candidate name: _____

Having completed theoretical instruction and assessment on _____,
the above named candidate has witnessed the following demonstrations of blood gas
sampling.

Sample Number	Date & time	Site used & comments about procedure	Performed by: (Sign)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

The candidate has witnessed sufficient demonstrations of blood gas sampling and feels confident to proceed to supervised practice.

Signature of candidate: _____

Print name: _____

Date: _____

Signature of WBM: _____

Print name: _____

Date: _____

ARTERIALISED CAPILLARY SAMPLING CHECKLIST

Candidate name: _____

Date of procedure: _____ Assessment No. _____

Patient condition: _____

Critical Performance Elements	Yes	No
COMPETENCY STATEMENT: Provides appropriate care for the patient requiring capillary blood sampling.		
1. Identifies the indications for obtaining capillary blood samples.		
2. Verifies patient details, selects correct equipment, washes hands, positions patient correctly.		
3. Selects appropriate site and checks for contraindications.		
4. Vasodilator cream applied to the ear & patient instructed not to touch ear. Effects of cream explained to patient.		
5. Ear inspected for warming after appropriate amount of time. Cream removed.		
6. Obtains capillary blood sample from ear: a. Cork or rubber bung held behind ear lobe with gloved hand. b. Earlobe pierced to depth of approximately 3mm using appropriate device (lancet, scalpel blade etc). c. 1 st drop of blood discarded & capillary tube placed at correct angle, in blood flow & filled to desired level. d. Ear is NOT SQUEEZED. Air bubbles removed immediately. Pressure applied to site until bleeding ceases. e. Sharps and biohazards disposed of safely		
7. Notes patient's temperature and inspired O ₂ to allow for correction of the blood sample.		
8. Washes hands, reassess patient including puncture site, and completes documentation.		
9. Sample is processed via the blood gas analyser.		
10. States the normal range for ABG results, and correlates the current result to previous or baseline ABG values.		
11. States precautions and measures aimed at reducing risk of complications.		

Outcome: Successful / Corrected & successful / Unsuccessful

Comment: _____

Signature of assessor: _____

Designation: _____

Date: _____

RADIAL ARTERY PUNCTURE CHECKLIST

Candidate name: _____

Date of procedure: _____ Assessment No. _____

Patient condition: _____

Critical Performance Elements	Yes	No
COMPETENCY STATEMENT: Provides appropriate care for the patient requiring arterial blood sampling.		
1. Identifies the indications for obtaining arterial blood samples.		
2. Verifies patient details, selects correct equipment, washes hands, positions patient correctly.		
3. Selects appropriate site and checks for contraindications.		
4. Performs and interprets Allen test according to procedure.		
5. Uses approved method of heparinizing syringe if kit not available.		
6. Prepares site and uses gloved finger to palpate site.		
7. Obtains arterial blood sample from radial artery: a. Correctly stabilises artery b. Performs puncture smoothly and allows syringe to fill. c. Expels air from the syringe and caps it tightly d. Applies pressure to site for at least 5 minutes. e. Sharps and biohazards disposed of safely		
8. Notes patient's temperature and inspired O ₂ to allow for correction of the blood sample.		
9. Washes hands, reassess patient including puncture site, and completes documentation.		
10. Sample is processed via the blood gas analyser.		
11. States the normal range for ABG results, and correlates the current result to previous or baseline ABG values.		
12. States precautions and measures aimed at reducing risk of complications.		

Outcome: _____ Successful / Corrected & successful / Unsuccessful

Comment: _____

Signature of assessor: _____

Designation: _____ **Date:** _____

RESULTS

To be successful in the assessment you must complete the portfolio and the clinical practice logbook. To be deemed competent to practice, it is required that there is evidence of a minimum of 5 successful consecutive capillary blood gas samples or 3 successful consecutive arterial blood gas samples.

If any areas of the portfolio or logbook are deemed incomplete, a pass will not be awarded. Feedback will be provided outlining the areas that are incomplete and the portfolio and the clinical practice logbook may be re-submitted. All candidates are allowed **1** re-submission at no additional cost.

Further re-submissions will incur additional costs for administration, academic time and postage.

APPEALS PROCEDURE

If a candidate feels they have been treated unjustly they have the right to appeal.

In the first instance this will be to the Blood Gas Certificate of Competence Registrar and then the ARTP Education Committee. The assessment committee will review all the paperwork produced (portfolio and log book) to judge the correct grade and their decision will be final.