

## Higher National Unit Specification

### General information for centres

**Unit title:** Spa Therapies: Water Hygiene

**Unit code:** DP3L 34

**Unit purpose:** This Unit is designed to inform candidates how to achieve and maintain healthy spa water. It is primarily intended for candidates wishing to work with spa treatments, including hydrotherapy or flotation. The Unit is also relevant to those who have limited experience of work situations involving water.

On completion of the Unit the candidate should be able to:

- 1 Use a water balance test set.
- 2 Know how to handle, store and apply water treatment chemicals safely.
- 3 Know what remedial action to take when test results are outside recommended parameters.
- 4 Demonstrate the importance of record keeping and legal requirements.

**Credit points and level:** 1 HN Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7\*)

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

**Recommended prior knowledge and skills:** Access to this Unit is at the discretion of the centre. However, it would be beneficial if the candidate had a basic knowledge of COSHH and risk assessment, an ability to read Material Safety Data sheets and some basic training in hygiene such as 'Safe and Hygienic Salon Practice'.

**Core skills:** There are opportunities to develop the Core Skills of Problem Solving at SCQF Level 6 and Numeracy at SCQF level 5 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

**Context for delivery:** If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

**Assessment:** Evidence for this Unit should be generated through practical observation checklists, questions on knowledge and case studies.

Case studies will be used to holistically assess the knowledge and skills of all Outcomes of the Unit. The candidate should gather information through practical checklists and information gathering. This information may be used for the closed book assessment lasting approximately one hour.

## **Higher National Unit specification: statement of standards**

**Unit title:** Spa Therapies: Water Hygiene

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

### **Outcome 1**

Use a water balance test set

#### **Knowledge and/or skills**

- ◆ use of water balance test kit to:
  - measure pH
  - measure residual disinfectant (free and combined)
  - measure total alkalinity
  - measure calcium hardness
  - record water temperature
  - measure (periodically) total dissolved solids
- ◆ use of Langelier Index to calculate water balance (BSI.PAS.39)

#### **Evidence requirements**

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ understand what constitutes a healthy balanced spa water
- ◆ demonstrate the use of a water balance test kit
- ◆ calculate the water balance (BSI.PAS.39)

This should be evidenced through an observation checklist and accurate record sheets.

#### **Assessment guidelines**

The assessment of this Outcome can be combined with Outcomes 2, 3 and 4 as part of a single holistic assessment for the Unit, details of which are given under Outcome 4.

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Spa Therapies: Water Hygiene

### **Outcome 2**

Know how to handle, store and apply water treatment chemicals

#### **Knowledge and/or skills**

- ◆ Manual Handling Operations Regulations
- ◆ never mixing chemicals together
- ◆ application of chemicals to water
- ◆ reading and interpretation of Material Safety Data Sheets (MSDS)

#### **Evidence requirements**

Candidates will need evidence to demonstrate their knowledge and/or skills by responding to three case studies, which include Material Safety Data Sheets (MSDS), explaining if the storage of chemicals was correct.

For holistic assessment of this Unit, candidates will be issued with six case studies at least one week before the assessment event. Candidates will be able to bring one side of an A4 sheet of relevant hand written notes to the assessment but no text books or class notes will be allowed. The assessment will be carried out under controlled conditions and last one hour.

#### **Assessment guidelines**

The assessment of this Outcome can be combined with Outcomes 1, 3 and 4 as part of a single holistic assessment for the Unit, details of which are given under Outcome 4.

### **Outcome 3**

Know what remedial action to take when test results are outside recommended parameters

#### **Knowledge and/or skills**

- ◆ Langelier Index
- ◆ values of correct water parameters
- ◆ effect of impurities
- ◆ health effects of failure to maintain correct disinfection
- ◆ water problem solving

#### **Evidence requirements**

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ identify the constituents of the Langelier Index
- ◆ calculate the Langelier Water Balance
- ◆ describe the action to correct an imbalance
- ◆ describe a safe approach to reduce or increase disinfectant residual

## **Higher National Unit specification: statement of standards (cont)**

### **Unit title:** Spa Therapies: Water Hygiene

This should be evidenced through practical observation checklists and six case studies linked to Outcome 2

#### **Assessment guidelines**

The assessment of this Outcome can be combined with Outcomes 1, 2 and 4 as part of a single holistic assessment for the Unit, details of which are given under Outcome 4.

### **Outcome 4**

Demonstrate the importance of record keeping and legal requirements

#### **Knowledge and/or skills**

- ◆ understanding and importance of accurate record keeping
- ◆ legal requirements — current Health and Safety at Work Regulations, Electricity at work Regulations, BSI.PAS.39) Personal Protective Equipment at Work Regulations
- ◆ reassurance of clients through use of accurate records
- ◆ use of records by Environmental Health Officers (EHOs) investigating complaints

#### **Evidence requirements**

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ complete a typical daily record sheet over a period of five consecutive days
- ◆ explain the source of legislation covering these records

Six case studies will combine knowledge and skills from all Outcomes of the Unit

#### **Assessment guidelines**

The assessment of this Outcome can be combined with Outcomes 1, 2 and 3 as part of a single holistic assessment for the Unit, details of which are given under Outcome 4.

## Administrative Information

<b>Unit code:</b>	DP3L 34
<b>Unit title:</b>	Spa Therapies: Water Hygiene
<b>Superclass category:</b>	HK
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<b>Version:</b>	03 (November 2007)

### History of Changes:

Version	Description of change	Date
02	Page 3 Outcome 2 Evidence requirements: MSDS in full. Page 4 Outcome 4 Knowledge and/or skills: current added and dates deleted from second bullet point. Page 7 Guidance on the content and context for this Unit Outcome 2: Second paragraph deleted.	29/09/06
03	Addition of Core Skills	November 2007

**Source:** SQA

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## **Higher National Unit specification: support notes**

### **Unit title: Spa Therapies: Water Hygiene**

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

### **Guidance on the content and context for this Unit**

This Unit is primarily intended to equip candidates with the essential knowledge and understanding of safe water disinfection in order to prevent disease which can have potential fatal consequences. The Unit should take the form of research and case studies as well as hands-on practical work.

#### **Outcome 1**

The main objective of this Outcome is to demonstrate the ability to provide safe healthy water with reference to BSI.PAS.39. Candidates must determine the analysis of the source of water and include the determination of the metals and minerals therein.

The correct disinfectant and pH values do not, in themselves mean the water is bacteriologically safe and so the routine use of a Water Balance Test Set must be backed up by using an external accredited laboratory or local Environmental Health Officer to verify the water meets the standards laid down in BSI.PAS.39.

Prevention of contamination of spa water by bathers — much of the dirt can be removed in advance of spa by pre-showering of the body, with or without a costume.

Disinfected is not the same as sterilised — disinfection is the inactivation of harmful bacteria such that those remaining are no longer a hazard to the bather.

Filtration as a component of the disinfection process — both chemical treatment and filtration must be working to ensure adequate disinfection. There is a need to ensure the filter is regularly back-washed (and chemically cleansed if necessary).

The source water utilised for the spa needs to be analysed by a laboratory (or the Water company if it is mains water) in order to check the presence of minerals or other metals that may interfere with the water treatment products.

If minerals are to be added to the water then the choice of disinfectant is important. This also applies to the use of sea water. It is important that the materials used in the construction of the spa are suitable for the use of these products.

Microbiology is important and the health of the bather depends on what biological contaminants are present. As these cannot be quickly and easily identified the pH and Bromine or Chlorine disinfectant residuals should be measured. Although disinfection processes such as Ozone or Ultra Violet (UV) reduce the chemical load they still require a disinfectant residual of BR or Cl.

## Higher National Unit specification: support notes (cont)

### Unit title: Spa Therapies: Water Hygiene

An external check by an accredited laboratory of local Environmental Health Officer is required to verify that the water is wholesome and healthy. Before these 'Plate' tests are arranged it is essential to advise the laboratory which chemicals are in the water as some of these can interfere with the 'Plate Culture' and will need to be neutralised in advance of the laboratory test.

#### Outcome 2

Whilst a spa would be expected to have continuous dosing of disinfectant as well as automatic control with pH control, attention **must** be paid to the general hygiene and cleanliness of the spa site. Care **must** be taken to ensure that only speciality chemicals designed for the purpose are utilised, or eg Sodium Bicarbonate used for general cleaning purposes and **never** household or general industrial cleaners. The cleaning processes are part of the overall hygiene regime and areas such as the water-line (scum line) where body fats tend to collect as well as the balance tank (if any) need to be cleansed thoroughly on a regular basis.

Although the design of a spa is not part of spa hygiene, attention must be paid to ensure there are no 'dead-legs' or other parts of the system that are not properly cleansed and disinfected.

An awareness of 'design bather load' is a necessary part for the appreciation of the whole course.

It is assumed that candidates will have a basic knowledge of Personal Protective Equipment at Work Regulations and Electricity at Work Regulations.

#### Outcome 3

Constituent parts of balanced water must be within set parameters.

Candidates should be aware that the disinfectant (Bromine or Chlorine) is not a constituent of balanced water but is the primary killing agent in making the water safe for bathers. Too low a Bromine or Chlorine residual will mean that there is a risk of bacteria growing and some of them maybe harmful. Too high a disinfectant residual will be harmful to both the bather and costume (if any). Values are set at which chemical dosing ceases and a higher value at which the bather must exit the spa water.

#### Outcome 4

The Health and Safety at Work Act in the UK lays down the inherent UK legislation which governs record keeping for spa waters with a particular world leading publication entitled *Legionnaires' Disease: The control of Legionella bacteria in water systems (L8)*.

Lifeguarding: This is not necessarily appropriate where a spa therapist is working with a client but reference in case of doubt should be made to *HSG 179 Managing Health and Safety in Swimming Pools (3rd Edition)*.

## Higher National Unit specification: support notes (cont)

**Unit title:** Spa Therapies: Water Hygiene

### Guidance on the delivery and assessment of this Unit

Candidates should adopt a holistic approach to the delivery of spa treatments thereby ensuring clients have a safe healthy spa in which to enjoy spa treatments.

Outcomes can be assessed individually or holistically.

The largest element is in Outcome 2 as there is almost no limit to problem solving.

The learning experience may be enhanced by visits to spas or by external speakers, eg EHO.

Useful websites which candidates should visit regularly for up-date advice include:

[www.pwtag.org](http://www.pwtag.org)  
[www.hse.gov.org](http://www.hse.gov.org)  
[www.hpa.gov.org](http://www.hpa.gov.org)  
[www.bishta.org](http://www.bishta.org)  
[www.spata.org](http://www.spata.org)  
[www.isrm.co.uk](http://www.isrm.co.uk)  
[www.ilam.co.uk](http://www.ilam.co.uk)  
[www.poolsandspaadvice.co.uk](http://www.poolsandspaadvice.co.uk)

BSI.PAS.39 (ISBN 0 580 42649 1) is a publicly available specification which came into effect on 2 December 2003. The section on Bacteriological Testing is particularly relevant to this Unit.

### *Opportunities for developing Core skills*

Elements of the core skill of Problem Solving, that is, planning and organising, critical thinking, reviewing and evaluating, will be developed and enhanced as candidates undertake the practical tasks associated with testing and assuring the safe condition of spa water. Identifying and taking account of the complete range of factors influencing health and safety is routine practice. Adhering to legislative requirements, and analysing potential sources of problems, candidates must handle, store and apply water treatment chemicals safely, and decide and take appropriate remedial action. Discussions of case studies during formative work could be useful to support analytical evaluation of proposed approaches as well as to review achievements.

As they demonstrate effective practice candidates have to perform a series of calculations and measurements. Numeracy skills should be naturally developed, with the focus throughout on practical interpretation and application of number and graphics. Formative contextualised activities could be designed to develop accuracy and confidence in a workplace situation.

### Open learning

Although the theoretical aspects could be studied through Open Learning, the high level of practical competencies required would create difficulties in the delivery and assessment of this Unit.

For further information and advice please refer to the SQA guide *Assessment and Quality Assurance for Open and Distance Learning (SQA, February 2001 — publication code A1030)*.

## **Higher National Unit specification: support notes (cont)**

**Unit title:** Spa Therapies: Water Hygiene

### **Candidates with additional support needs**

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on the SQA website [www.sqa.org.uk](http://www.sqa.org.uk).

## **General information for candidates**

### **Unit title:** Spa Therapies: Water Hygiene

This Unit is designed to enable you to ensure that clients enjoy safe healthy spa water.

Outcome 1 will provide you with the knowledge and skills to determine the actual operating parameters of the spa utilising a Water Balance Test Set; and to determine if the water is suitable for human use and that it is neither corrosive nor scale-forming.

Outcome 2 will give you the knowledge, which covers the safe storage, handling and application of water treatment chemicals.

Outcome 3 looks at solutions to common problems, which may arise, eg test results being outside set parameters.

Outcome 4 looks at record keeping and associated legislation, including the Bacteriological Standards of BSI.PAS.39.

Evidence for this Unit should be generated through practical observation checklists, questions on knowledge and case studies.

Case studies will be used to holistically assess the knowledge and skills of all Outcomes of the Unit.

You should gather information through practical checklists and information gathering. This information may be used for the closed book assessment lasting approximately one hour.