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# Unit Specification

**UHB219 – Perm and neutralise hair**

Unit reference number: J/617/1720

**Level: 2**

**Guided Learning (GL) hours: 93**

## Overview

The aim of this unit is to develop learner's knowledge, understanding and skills to be able to carry out basic perming and neutralising services to the satisfaction of the client.

Learners will be required to demonstrate different winding techniques and the ability to conduct a range of tests on hair.

Learners will need to maintain health, safety and hygiene salon procedures throughout the unit. Additionally, learners must maintain their personal appearance and demonstrate effective communication and consultation skills.

## Learning outcomes

On completion of this unit, learners will:

LO1 Be able to perm and neutralise hair

LO2 Know how health and safety policies and procedures affect perming, neutralising and chemical rearranging services

LO3 Understand the factors that influence the perming, neutralising and chemical rearranging services

LO4 Understand the science of perming, neutralising and chemical rearranging services

LO5 Understand the tools, equipment, products and techniques used for perming, neutralising and chemical rearranging services

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# Unit content

## LO1 Be able to perm and neutralise hair

### Prepare for perming and neutralising services

#### Taught content to include

- Preparation of learners should include:
  - Clean and hygienic appearance e.g. avoidance of overpowering odours – tobacco, heavy perfume/aftershave
  - Good communication and listening skills
  - Correct posture with weight evenly balanced
  - Use of protective garments e.g. gloves
- Preparation of the working area to include:
  - Chair and work area to be clean before the client arrives
  - Chair is positioned correctly including height
  - Adequate work area to allow safe use of electrical equipment e.g. if heat is used for processing the perm
  - Products on display to be clean of dust and hair
  - Tools and equipment to be clean and sterilised
  - Electrical equipment to be visually checked before use e.g. for centres within the United Kingdom portable appliance testing (PAT) may be required when using electrical equipment
  - All tools and equipment to be positioned for ease of use
- Preparation of the client to include:
  - Clean protective garments for the client
  - Visual checks of client's scalp for signs of cuts, sores, abrasions or infections; check the hair for infestations and suitability of service
  - Removal of obstructive jewellery
  - Application of barrier cream around the hairline
  - Use of cotton wool (if applicable) to prevent drips and contact to skin around the client's hairline
  - Check of the client record card (where appropriate) for previous services and client history
  - Check all tests have been undertaken

## Apply safe and hygienic methods of working throughout services

### Taught content to include

- Working safely throughout the service to minimise risk, harm or injury to self or others
- Minimise the risk of damage to tools and equipment
- Ensure that materials are disposed of hygienically and appropriately
- Ensure the use of clean resources
- Ensure there is sufficient stock, which is used appropriately to minimise the wastage of products
- Ensure personal protective equipment for both the stylist and the client are used at all times
- Ensure client's scalp and hairline is protected
- Manufacturers' instructions are checked to identify:
  - Whether a pre-perm treatment is required
  - Application method e.g. pre or post damping
  - Processing and neutralising timings
- Assess the hair conditions for contra-indications and suitability for perming services to include:
  - Hair classification
  - Hair characteristics
  - Hair elasticity, porosity, texture, density, condition, growth patterns and hair length
- Assess the scalp condition to assess for contra-indications and the suitability of the perming service to include:
  - Cuts, sores and abrasions
- Ensure product does not get into client's eyes or skin and clothes
- Ensure the work area is well ventilated to minimise fumes
- The position of the client meets the needs of the service without causing them discomfort
- Ensure own posture and position is correct to minimise fatigue and the risk of injury
- Ensures the work area is clean and tidy throughout the service
- Make effective use of their working time
- Adheres to the safe and hygienic methods of removing waste during the perming service are followed including removing damp/saturated cotton wool from client's skin

### Consult with clients about services and outcomes of tests

#### Taught content to include

- Undertaking appropriate tests, discussing and recording outcomes to include:
  - Elasticity test
  - Porosity test
  - Incompatibility test
  - Pre-perm test curl
- Consulting and confirming with the client before perming commences to agree the chosen style, desired look and finished degree of waves and/or curls
- Offering alternative services for poor condition/over porous hair
- Identify possible resistant or potential difficult hair growth pattern areas
- Establish with the client if any areas of the hair have not permed very well previously
- Asking the client appropriate questions to identify if they have any sensitive areas of the head or allergies/skin sensitivity
- Establishing if the client has had a previous history of sensitivity to perm lotion, if necessary:
  - Undertake a pre-perm skin test
- Accurately recording the client's responses to questioning

### Confirm with clients the desired effect

#### Taught content to include

- Confirm with the client the desired look agreed at consultation prior to starting the service, use style books/digital media with examples of styles and degree of curl
- Discuss lifestyle as this may impact on style, degree of curl and longevity of perm
- Agree the required finished style e.g. blow-dry, setting, left naturally to dry
- Consult with client throughout service

### Select suitable products, tools and equipment

#### Taught content to include

- Products – examples include:
  - Appropriate perm solution and neutraliser for hair classification
  - Pre-perm shampoo
  - Pre-perm products
  - Perm lotions – acid wave, cold wave, exothermic
  - Barrier cream/lotion
  - Post perm treatments (as advised by manufacturers' instructions)
- Tools – examples include:
  - Non-metallic bowls
  - Sponges/applicators
  - Selection of combs
  - Sectioning clips/clamps
  - Personal protection equipment (PPE) for stylist and client
  - Selection of different sized perm rods
  - End papers
  - Cap (if required)

- Equipment – examples include:
  - Electric accelerator/dryer (as per manufacturers' instructions)
  - Timer
  - Water spray
  - Cotton wool

### **Carry out perming and neutralising services**

#### **Taught content to include**

- Perm winds – depending upon client's finished result requirements:
  - Brick wind
  - Directional wind
  - Nine section wind
- Neutralisers:
  - Bottle
  - Foam
- Apply appropriate sectioning to the hair for the perming service
- Apply appropriate techniques depending upon the client's hair classification and characteristics
- During the development time, test for elasticity and tensile strength and the degree of curl achieved

### **Provide clients with advice and recommendations on the service(s) provided**

#### **Taught content to include**

- Advising on most suitable time to perm hair e.g. perm hair before colour services
- Advise on shampoos, conditioners and styling products to use
- Advise client regarding the effects of atmospheric moisture e.g. hair if wet will revert to its reformed permed state
- Advise on home care maintenance e.g. suitable home care products and handling the hair
- When to return to the salon for maintenance

## LO2 Know how health and safety policies and procedures affect perming, neutralising and chemical rearranging services

### The responsibilities for health and safety in own role

#### Taught content to include

- Relevant legislation for consultation, client care, confidentiality and consumer/retail, for the country the qualification is taken, which includes: General Data Protection Regulation (GDPR), consumer rights, health and safety, equality. Health and safety regulations for the country where the qualification is taken, examples within the United Kingdom would include
  - The Health and Safety at Work act
  - The Management of Health and Safety at Work Regulations
  - Provision and Use of Work Equipment Regulations
  - Personal Protective Equipment at Work Regulations
  - Electricity at Work Regulations
  - Reporting Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)
  - The Consumer Protection Act
  - The Trade Descriptions Act
  - Control of Substances Hazardous to Health Regulations (COSHH)
  - Salon insurance requirements, employers liability, public liability, professional indemnity
- Responsibilities for health and safety to include:
  - The reasons why all staff working in the salon have a responsibility for the health and safety of themselves and others
  - The salon safety regulations to ensure their actions do not put others at risk, which includes all staff, clients and visitors
- Additional factors will include:
  - The reasons why it is important to accurately describe the features and benefits of products and services
  - The reasons and importance for gaining client consent
  - The maintenance of the salon environment including:
    - The comfort of the salon
    - Cleanliness of the salon to prevent cross-infections via direct or indirect contact
    - Provisions and use of workplace equipment – using only products, tools and equipment trained to use
    - Reasons for personal protective equipment (PPE) e.g. using protective gloves to prevent contact dermatitis when using certain products
    - Making visual checks on all electrical equipment and reporting faults/isolating power
  - Ensuring manufacturers' instructions are always followed when using products and equipment
  - Responsibilities of reporting certain work-related incidents or accidents, diseases and dangerous occurrences to a senior staff member
  - Ensuring the public are protected from the manufacture of supplied unsafe goods or misleading price indications
  - Prevent a false trade description to any goods that are supplied or offered to supply any goods to which a false trade description has been applied, or false statement about the provision of any service
  - Ensure that all personal client data records remain safe and confidential
  - Update client records following service

- Hazards associated when perming and neutralising the hair
- Risks associated to perming and neutralising the hair
- Safety when using associated products, tools and equipment
- Reasons to undertake appropriate perming tests both on the client and the hair
- Avoidance of excessive inhalation of products
- Recognising contra-indications to perming and neutralising services

### **The potential hazards and possible risks that may occur in the workplace and affect services**

#### **Taught content to include**

- The importance of ensuring that all chemicals relating to perming and neutralising the hair services are stored, handled and used in accordance to salon policy, local bylaws and manufacturers' instructions
- The potential hazards and risks associated to not completing appropriate tests on the client and the hair
- Hazards – anything that has the potential to cause harm, e.g. spillage of product on the floor
- Risks – a chance, high or low, that harm caused by the hazard may occur, e.g. potential for self, client or others to slip on the spillage
- Working safely throughout the service, an example may include ensuring there is adequate room around the client with no obstructions
- Ensuring use and maintenance of any equipment is monitored and visual checks are conducted e.g. checking for loose wires and temperature settings when using heat appliances for perming and neutralising the hair services
- Ensuring the client is comfortable and free from harm throughout the service e.g. removing jewellery that may obstruct application for the perming and neutralising hair services
- Disposing of waste appropriately to minimise risk of cross-infection and ensure there is no unnecessary risk to the environment, e.g. ensure clean protective garments are freshly laundered for every client
- Correct handling and storage of all products, tools and equipment as applicable to the country the qualification is being taken in
- The importance of ensuring a thorough visual check of the hair and scalp is performed prior to the service to prevent cross infection e.g. ensuring there are no cuts, sores or abrasions on the scalp
- Risk of electric shock when using electrical equipment to enhance the service to include potential hazards of trailing wires
- Fire – the salon's policy in the outcome of a fire and where the assembly point is
- The importance of ensuring personal protective equipment (PPE) requirements are followed for both client and stylist e.g. the use of gloves when applying solutions for the perming and neutralising the hair services

### **The safe and hygienic working methods and practices that must be followed throughout the services**

#### **Taught content to include**

- The importance of providing personal protective equipment (PPE) for both client and stylist e.g. prevention of damage to clients clothing
- Use of clean and sterile tools equipment for all clients
- The importance of protecting the client's skin, eyes and clothing e.g. products splashing into the eyes
- Barrier cream for client's hairline where required
- Sectioning hair appropriate for the technique to be used when winding for the perming service
- Systematic application of products when perming and neutralising
- Control of electrical equipment (if used)
- Organisation of working area e.g. the importance of ensuring the tools and equipment are positioned for ease of use
- Avoid trailing wires, spillages from products on the floor

### **Contact dermatitis and how it can be prevented**

#### **Taught content to include**

- Recognising contact dermatitis symptoms
- Contact dermatitis – is a rash caused by the skin reacting to a substance it has come into contact with e.g. chemicals. Symptoms can be varied and include:
  - Skin redness
  - Extreme itching
  - Oozing or blisters, may make skin swell
  - Skin that appears darkened or hard/leathery to touch that may become dry or flaky
  - Sensitive to products and sunlight
- How to avoid contracting and preventing measures which may include:
  - Wearing gloves (recommended) when shampooing hair prior to perming hair service
  - Rinsing and drying hands thoroughly
  - Use of moisturisers or barrier creams
- Correct handling and storage of all products, tools and equipment
- Following and adhering to manufacturers' instructions when using products to perm and neutralise the hair



### **The importance of questioning clients prior to and during services**

#### **Taught content to include**

- Understanding the clients requirements and expectations for the permed finish resulting style
- To check for contra-indications and identify any factors that may influence the perming and neutralising service
- To ensure the client understands the process
- To provide the client the opportunity to ask questions (where necessary)
- To ensure the client is comfortable
- To gain information on how they maintain their hair, lifestyle and commitment to the finished permed style
- To ensure and confirm that the client's expectations are met for the perming service
- The legal significance of client questioning and the recording of client's responses to questioning
- The importance of informing the client of the likely cost, duration and expected outcome of the service
- The importance of confirming client's satisfaction

### **The importance of preventing cross-infection and cross-infestation**

#### **Taught content to include**

- How to avoid cross-contamination, cross-infection or cross-infestation
- Ensuring the clients scalp and hair are checked prior to the perming and neutralising service
- Avoidance of cross-contamination e.g. using unclean tools or protective garments from one client could contaminate the next client's hair or scalp
- Ensure the professional salon image is maintained

## L03 Understand the factors that influence the perming, neutralising and chemical rearranging services

### The factors that may influence the services

### The ways of dealing with any influencing factors

Taught content to include

- Hair classification

Hair classifications table			
Type 1: Straight hair	1A - Fine/thin	1B - Medium	1C - Coarse
	Straight	Straight with volume	Straight difficult hair
Type 2: Wavy hair	2A - Fine/thin	2B - Medium	2C - Coarse
	'S' pattern	Frizzy 'S' pattern	Very frizzy 'S' pattern
Type 3: Curly hair	3A - Fine/thin	3B - Medium	3C - Coarse
	Soft curl	Loose curl	Tight curl
Type 4: Very curly hair	4A - Fine/thin	4B - Medium	4C - Coarse
	Tight coiled curl pattern	'Z' pattern and spring curl	Tight 'Z' pattern

- Density – This is defined as the number of hairs on the scalp and will affect the choice of tools and products used and the time of the service. To include:
  - Assessing the hair thoroughly e.g. to achieve soft curl on thick, dense, coarse hair avoid using small rods that increase the volume of the hair, unless this is the desired effect
  - Ensuring the correct sections e.g. prevent making sections that are too large for the rod on hair that has very low density; this may cause undue tension and breakage at the root area
- Texture – the circumference of an individual strand of hair. Hair can be fine, medium or coarse. Coarse hair has the largest circumference, and fine hair the smallest. Texture may affect the porosity of the hair. To include:
  - When the use of pre-perm treatments are required to even out the porosity of the hair
  - Selecting perming products according to hair texture combined with hair classification
- Elasticity – This relates to the condition of the cortex layer of the hair. Elasticity levels are affected by how the hair is treated and its general condition. If the hair stretches and snaps or does not return to its original length this indicates internal damage to the cortex. The hair's elasticity will influence the selection of perming products and may indicate whether services may be limited or affected
- Porosity – this relates to the condition of the cuticle. Porosity levels are caused by both chemical and physical damage. Cuticles that are raised and feel rough are known as porous and will absorb water and perming products more easily and unevenly. To include:
  - Selecting suitable pre-perm treatment products where required
- Hair condition – Hair that is in good condition will be shiny, smooth, with good porosity (flat cuticle scales) and good elasticity. Hair that is in poor condition will be dull, may have split ends or torn cuticle, be over-elastic, have signs of breakage and have dry, porous ends or lengths. Hair condition will influence the selection of perming products and may indicate whether services may be limited or affected
- Hygroscopic – hair has the ability to absorb moisture into the cortex

- Growth patterns – this relates to the direction the hair grows from the scalp and may influence the desired finish. Selection of sectioning and winding patterns may help overcome a difficult growth pattern
- Other factors include:
  - Head and face shape and size – this relates to the overall shape and size of the client's head and includes any specific features. When finishing the permed effect it is important to ensure that the client has a style they can manage and which suits their overall appearance e.g. a client with a long face may not require height on the crown or a client with a round face may be best suited with minimal volume at the sides. Head size influences sectioning and the amount of rods to be used
  - Lifestyle – this is about the client's everyday activities and working patterns e.g. a client who works and has two young children with very little time for themselves, requires a permed effect that is easily manageable and requires minimal styling
  - Hair length – this will affect the general condition of the hair. If the hair is long, the ends may show the presence of physical or chemical processes which may affect the condition. To include:
    - The need for possible other services e.g. cut, conditioning or specialised treatment services
    - Timings for perm winding – long hair will take longer to wind than short hair
    - Pre-damping and post damping – when to use pre-damping and post-damping product application
    - Application of product – to ensure sufficient perm lotion is applied throughout the lengths of the hair without saturating the scalp
    - Rod size – for example the weight of long, heavy hair may pull on the formed curl or wave pattern
  - Direction of movement required – the degree of perm movement is determined by the angle that rods are wound and the size and direction of the section. To include:
    - Sectioning techniques to create the desired direction for the permed effect
    - Correct rod size
    - Correct winding techniques
  - Services prior to perming and neutralising – other services offered prior to perming and neutralising may influence the selection of products or contra-indicate the service
  - Temperature and humidity of the salon, client and general external weather conditions – these will be influencing factors when perming and neutralising; both the inside and outside temperatures. A salon that has poor ventilation may produce a damp and humid atmosphere, affecting services e.g. if outside weather conditions are very hot and sunny, the heat will accelerate the processing time. Temperature control within the salon must be adjusted with either additional heating, ventilation or assisted fanning devices
    - Warm temperature examples include:
      - The perm will process readily and require frequent test curls to assess curl development
      - The use of additional heat unless stated in the manufacturers' instructions e.g. most manufacturers' recommend additional heat source for processing an acid perm
    - Cool temperature:
      - The perm may process slowly and will require frequent test-curls to assess curl development e.g. If the test shows slow curl development in relation to time, then a longer processing

time is required or the use of an additional heat source to speed the curl development if manufacturers' instructions allow

- Degree of existing curl – e.g. the existing curl influences winding tension and rod size
- The different methods of chemical re-arranging applications required to reduce the degree of curl to include:
  - Adapting application methods
  - Regrowth hair e.g. the condition of the ends of the hair may require a pre-perm treatment; application of perm lotion to root areas only
  - Virgin hair e.g. ensuring even sections and the rod size chosen is appropriate for hair length and style in order to achieve a balanced finished result
- Effects on the hair and scalp when different chemical re-arranging applications are used to straighten or remove curl to include:
  - The need to undertake the correct tests on the hair to check for suitability
  - The need to ensure the scalp has been thoroughly examined prior to regrowth service
  - Ensure even application of products
  - Importance of ensuring the hair is not overstretched causing damage or breakage
  - The importance of ensuring manufacturers' processing times are followed correctly

#### **Why and when chemical rearranging of the hair is necessary**

##### **Taught content to include**

- To straighten hair that has been permed
- The use of relaxing products to pre-soften the hair e.g. ammonium-thioglycolate
- Removal of existing curl e.g. sodium hydroxide relaxers/calcium hydroxide relaxers
- To reduce the degree of curl e.g. ammonium-thioglycolate may be used to straighten fine difficult hair, or if the client does not want all the curl to be removed

## LO4 Understand the science of perming, neutralising and chemical rearranging services

### Contra-indications and how they affect perming, neutralising and chemical rearranging services

#### Taught content to include

- The importance of undertaking a full consultation
- The importance of undertaking, recording and recognising the outcomes of tests on the hair e.g. incompatibility of products
- The importance of recognising any contra-indications to perming and neutralising services that may affect the hair/end result e.g. over stretched very porous hair may not be suitable for the service
- The importance of recognising any contra-indications to perming and neutralising services that may affect the scalp e.g. adverse skin conditions, scalp irritation, cut or sores
- Contra-indications to perming and neutralising services to include, bacterial, viral or fungal infections
  - Bacterial infection examples include:
    - Impetigo – begins as blisters that itch, then fill with a yellowish-brown fluid, that once rupture becomes a flat crust
    - Folliculitis – infection of the hair follicle, causes bumps with pus. May be painful, itchy, sore or swollen
  - Viral infection examples include:
    - Herpes simplex, a raised red blister full of fluid. It will usually be painful and tender to the touch
    - Warts, small, fleshy, grainy bumps usually flesh-coloured, white, pink or tan. Rough to the touch and can be sprinkled with black pinpoint, which are small, clotted blood vessels
  - Fungal infection examples include:
    - Ringworm – depends where it appears but may be red, itchy, scaly, or raised patches that develop blisters or begin to ooze. Patches that may be redder on the outside edges creating a 'ring' effect
  - Infestation/parasites:
    - Head lice – are tiny grey/brown insects. Head lice cling to hairs but stay close to the scalp which they feed off. Head lice lay eggs which hatch after 7 to 10 days. It takes about 7 to 10 days for a newly hatched louse to grow into an adult and start to lay eggs known as nits. Nits are the empty yellow-white eggshells which are left when the lice hatch. Nits look like dandruff but stick strongly to hair
    - Scabies – itchy skin condition causing a rash which may cause tiny blisters or sores where mites have burrowed into the skin
- Hair defects, contra-indication examples include:
  - Trichorrhexis nodosa – hair which breaks easily. Symptoms can include patches of hair loss or extremely short hair that appears not to grow. The hair shaft has thickened or thinned areas or has excessively split ends with discolouration
  - Monilethrix – is a condition that affects hair growth. The common characteristic is that individual strands of hair have a beaded appearance that results in short, fragile and broken hair
- The course of action to be taken if contra-indications are suspected to include:
  - The limits and boundaries of duties
  - Not to offer diagnosis
  - Which conditions need reporting and when

- Who to report to and where to record the findings
- Referral for medical attention or advice
- History of previous allergic reaction or irritation to perming and neutralising services
- The importance of checking the condition of the hair and scalp
- History of previous allergic reactions
- The importance of questioning the client regarding if they have had any adverse reactions to medication, products, or services in the past
- Recognising non-contagious conditions which may prevent or restrict a perming and neutralising service to include:
  - Cuts, sores or abrasions
  - Sebaceous cyst – tender or sore raised bump on skin, which if infected or inflamed will contain pus
  - Psoriasis – common skin condition that changes the life cycle of skin cells. Causes a build-up of skin cells which may appear thick silvery and inflamed. May cause itching
  - Contact dermatitis – is a rash caused by the skin reacting to a substance it has come into contact with e.g. chemicals. May be noticeable around the client neckline/ear area due to contact with nickel based jewellery/earrings. Symptoms can be varied and include:
    - Skin redness
    - Extreme itching
    - Oozing or blisters, may make skin swell
    - Skin that appears darkened or hard/leathery to touch that may become dry or flaky
    - Sensitive to products and sunlight
  - Seborrhoea – over activity of sebaceous glands by excessive secretion of sebum resulting in an oily coating on the skin – e.g. may limit the effects of the perming solution
  - Scalp sensitivity – an inflamed, sore and red scalp, may limit or prevent the perming service
  - Recent scar/tissue injury may be tender and sensitive
  - Alopecia
    - Loss of hair in patches on the scalp
  - Traction alopecia – hair loss at the point of tension, possible after the removal of hair extensions, may limit or prevent the perming or chemical rearranging service
  - Hair loss as a result of chemotherapy – usually temporary and hair is lost over scalp and body
  - Hair loss as a result of medication or medical conditions, e.g. thyroid imbalance
  - Hair loss as a result of hormonal changes, e.g. after giving birth
  - Hair loss, possible after the removal of hair extensions, medication, stress or trauma (alopecia), may limit or prevent the perming or chemical rearranging service

## **The importance of tests to the hair and scalp prior to and during perming, neutralising and chemical rearranging services**

### **Taught content to include**

- To understand the reasons why tests are carried out
- The importance of following manufacturers' instructions for tests and the potential consequences of failing to carry out these tests
- To ensure that all tests are collated, dated and are stored and recorded for future reference
- To ensure there is a history of all test results
- To ensure that the records have full and accurate information including additional comments relating to the tests
- To prevent possible legal action
- To ensure the perming, neutralising and/or chemical rearranging service finished results are as expected e.g. correct degree of curl or even degree of straightness of the hair
- To ensure the perming, neutralising and/or chemical rearranging service finished results meet the client requirements

## **When and how perming and neutralising tests are carried out**

### **Taught content to include**

- Prior to perming and neutralising services:
  - Skin tests for perming or chemical re-arranging – in certain circumstances where a client has a history of sensitivity to products, a test to check for allergic reactions or skin sensitivity to perming, chemical re-arranging or neutralising lotions can be undertaken
    - Clean an area behind the ear and apply a small amount of intended perm lotion and neutraliser to the skin 24-48 hours prior to perming service
    - Leave the test for 24-48 hours
    - If the skin becomes red or sore then the perm should not be carried out
  - Elasticity test – may prevent or restrict the application of perming products if the hair is stretched and does not go back to its original state
    - On wet hair, take individual strand of hair from 3-4 areas of the head – if hair is dry then dampen thoroughly
    - Hold one single hair securely and pull it – if the hair stretches and return to its original length without breaking – it has normal elasticity. If hair breaks or fails to return to its original length it has low or no elasticity
  - Porosity test – the hair's ability to retain moisture. Where hair is porous it may prevent or restrict the service. Porous hair tends to process chemicals quickly and can therefore over-process easily. Additional advice to client may include hair treatments, pre-perm treatments, restyle or cut
    - To determine the external strength of cuticle – take a few strands of hair slide down towards the scalp using one finger and one thumb
    - The more resistance felt, the more porous the hair
  - Incompatibility test – to check for the presence of metallic salts in the hair. If present, it will result in the hair becoming discoloured or dissolving and result in a positive reaction. This will prevent the perming and neutralising service

- Take a cutting from the hair, secure with cotton or adhesive tape. Pour 20mls of liquid 6% hydrogen peroxide into a non-metallic bowl. Add 5 drops of ammonium hydroxide. Leave for up to 30 minutes. If there are no compatible substances on the hair there should be no reaction in the bowl. Where metallic salts are present the liquid will react with the hair and it may change colour or disintegrate
  - Pre-perm test curl (if appropriate) – may include the assessment of the suitability of perming lotion, rod size, degree of curl or timing and development. Wind, process and neutralise one or more section of the hair
  - Test cutting (if appropriate) – may be using to check the processing and development when perming or chemically re-arranging the hair
  - Pull test – to assess potential hair loss after removal of hair extensions or plaits
- During the perming service:
  - Development test curl for perming:
    - Follow manufacturers' instructions for development time
    - Wear gloves
    - Check perm rods at different parts of the head to allow for accurate test results
    - Unwind the perm rod one and half turns
    - Push the hair up then inwards towards the scalp, allowing it to relax in an 'S' shape movement
    - When the 'S' shape corresponds to the size of the perm rod the processing is complete and ready for the neutralising stage
  - Strand test – used to confirm straightening has been achieved by taking strand tests on different areas of the head and at suitable times in the chemical rearranging process:
    - Follow manufacturers' instructions for development time
    - Wear gloves
    - Remove product with cotton wool from a small section of hair
    - If the hair stays straight (or has reached the desired degree of straightness) and does not revert to its original curl the processing is complete and ready for the neutralising stage



## How test results influence the perming, neutralising and chemically rearranging service

### Taught content to include

- The importance of ensuring that test results are recorded and stored accurately so that a history of results can be reviewed e.g. repeating elasticity tests after a period of time to ascertain if there's been an improvement in the hair condition
- The potential consequences of failing to undertake the appropriate tests
- To check for contra-indications e.g. the scalp is free from cuts, sores or abrasions
- To check the client's hair condition, texture, porosity or possible breakage
- To discuss limitations with the client
- To confirm hair classification
- To confirm hair characteristics
- To analyse any pre-existing chemical services on the hair e.g. colouring and/or lightening services that may be influenced or influence by the perming and neutralising service
- To ascertain the correct perming solution to use
- Skin/sensitivity test – positive and negative reactions e.g. a negative reaction means the service can continue
- Elasticity test – influences the product choice, application and final required result e.g. a poor elasticity outcome may prevent the service and advice on further treatment services with the client to improve the overall condition of the hair before the perming service can be carried out
- Porosity test – may restrict or prevent chemical service – application techniques and product choice need to take into account the differences in hair structure and may affect final may result in unevenness of the perm or in some circumstances further damage to the hair
- Incompatibility test – prevents chemical service. There is a presence of metallic salts in the hair and if chemicals are added it may result in the hair destruction
- Pre-perm test curl – will help determine the suitability of perming lotion, rod size, degree of curl or timing and development depending upon the hair classification and characteristics
- Pull test – will determine suitability of perming and neutralising service
- Development test curl – to check the processing and timing of the service. If not undertaken this may result in under or over processing of the service

## The effects on the hair structure when perming, neutralising and chemically rearranging service

### Taught content to include

- To include:
  - Hair consists of hardened protein called keratin – made up amino acids and peptide bonds. Found in the cortex. Together form polypeptide chains or links. Polypeptide chains or links are supported by weaker hydrogen bonds and strong disulphide bonds. Disulphide bonds can only be broken by either a chemical perming or relaxing service. The high alkalinity of the perm solution opens up the cuticle scales allowing the chemicals to enter the cortex. Perming products applied to hair cause some of the disulphide bond to break
  - Softening (reduction) stage – perm lotion enters and swells the cuticle, so it can enter the cortex (acid perms will need heat to help open the cuticle) and disulphide bonds begin to break (made up of two Sulphur atoms – cystine)
  - Moulding stage – perm lotion deposits hydrogen into the cortex, hydrogen attaches to the disulphide bonds breaking into individual sulphur atoms. The individual sulphur atom is called cysteine. The breaking of the bonds makes the hair more pliable allowing it to take on the shape of the perm rod
  - Fixing or oxidation stage – disulphide bonds re-join in the newly formed shape by the addition of oxygen. The oxygen joins with the added hydrogen to make water (H<sub>2</sub>O), the water floods out of cortex, and the disulphide bonds reform, with an acid pH
- The importance of assessing the hair for previous chemical treatments:
  - The effect of over-lapping perming products on the structure of the hair on previous chemically treated hair to include:
    - Potential breakage
    - Damage to hair/cuticle
    - Increased porosity

### The active ingredients in perming and neutralising products

#### Taught content to include

- The different types and strengths of perming and chemical rearranging products available for the different types of hair classification and condition
- The importance of referring to the manufacturers' instructions for the safe use of perming products due to the uniqueness of each brand
- The active ingredients/chemical composition of perming and neutralising products to include:
  - Cold wave perming solution – ammonium thioglycolate and ammonium hydroxide
  - Acid wave perming solution – glyceryl monothioglycolate
  - Neutralising agents – hydrogen peroxide and sodium bromate
- The active ingredient most commonly used for perming or chemically re-arranging coarser hair and classification type 4 hair is ammonium-thioglycolate
- The main chemical ingredient for acid perm lotion is glycerol-monothioglycolate and usually work on the hair at lower pH values e.g. may be best suited for coloured hair
- The main chemical ingredient for an alkaline perm lotion is ammonium-thioglycolate and usually work on the hair at higher pH values
- The neutralising chemical ingredient is either hydrogen peroxide or sodium bromate
- The importance of pre and post perm products to include:
  - Following manufacturers' instructions
  - Pre-perm products – used prior to perming used to even out the porosity along the hair, form a protective barrier along the cuticle
  - Post-perm products – used after neutralising and closes and smooths the cuticle, rebalances the hair to its natural pH value (4.5 -5.5)

### The effects that temperature has on the perming process

#### Taught content to include

- External/salon temperature will affect the processing of a perm e.g. will process more quickly in a warm salon
- Body heat affects the processing e.g. trapping head heat using a plastic cap
- Warm temperature:
  - The perm will process readily and the need to take frequent test curls to assess curl development
  - An additional heat source must not be used if the perm is readily processing unless stated in the manufacturers' instructions. For example most acid perm processing requires an additional heat source regardless of the ambient temperature in the working environment
- Cool temperature:
  - The perm may process slowly and the need to take frequent test-curls to assess curl development
- Use of electrical accelerators (where indicated by manufacturer) speed up processing time

## LO5 Understand the tools, equipment, products and techniques used for perming, neutralising and chemical rearranging services

### The techniques, tools, equipment and products available and the effects they achieve

#### Taught content to include

- Techniques:
  - Basic sectioning winding – ideal for all hair types, methodical winding technique, hair sectioned in to 6 or 9 sections – creates an even amount of movement from roots to points all over the head. This method uses conventional perming rods
    - Performed on hair over 7.5 cm
    - The client's head should remain upright to ensure projection of the hair from the head is not distorted
    - Sections are taken by measuring the length and thickness to match the selected rod, this is referred to as a normal section
    - The hair must be combed smoothly from the root to avoid the hair being twisted or distorted
    - The hair must be angled slightly forwards and the section held centrally to avoid distortion when the hair is wound to the root
    - The hair is wound from point to root using end papers to keep the ends smoothly wrapped around the rod. Before placing the end paper the points should not be bunched together but held slightly spaced out to around 2.5 cm
    - The wound rod sits directly on top of the section created on the head, this is referred to as winding 'on base'
    - Tension – a firm, even tension is placed on the hair while winding the rod to the base to smooth natural movement
    - All lotion types are suitable
    - Apply sufficient lotion to the hair without flooding the scalp, which may cause burns
  - Directional sectioning winding – supports the style, the hair is wound in the same direction that the hair is to be finally worn. Ideal for shorter hairstyles
  - Brick sectioning winding – rollers placed in a brick formation pattern. As the rods are placed in staggered sections there is less likelihood of obvious gaps or partings showing. Ideal for short hairstyles or hair that is fine in texture
  - Spiral winding – the hair is wound from roots to points around different types of hair shapers or curlers (e.g. soft bendy rollers). Used for longer hair types to produce curls mostly down the lengths of the hair
- Tools and equipment:
  - Pin-tail comb – the narrow pin-tail is used for precise and accurate sectioning when using the post-damping method
  - End papers – made of fibre or fine paper. Used to wrap and enclose the points of the hair enabling the points to be wound smoothly around the rod
  - Perming rods – made of plastic and are narrower in the middle to help to guide the hair evenly along the length of the rod when winding. Rods are colour-coded according to size. The larger the diameter of the rod, the bigger the curl effect produced
  - Non-conventional perm rods – e.g. bendy sponge; stack types rods used as alternative winding implements usually for longer hair types

- Spacers – thin stick-like pieces of plastic. They are used to slip underneath the fastened bands on wound rods to prevent band marks caused by the pressure of the band across the hair
- Non-metallic sectioning clips and non-metallic bowl – used during perming procedures. Metallic items react adversely when in contact with perming lotions
- Cotton wool strip – used dampened with water and placed around the hairline to protect the clients skin and eyes from drips of perming product
- Plastic head cap – polythene caps used to place over the wound perm to retain moisture, heat and aid processing
- Neutralising sponge – specially designed sponge with a grooved surface used to foam neutraliser and to apply neutraliser to wound rods
- Water spray – to aid the winding process and ensure even dampness of hair
- Timer – to check on development time
- Heat accelerators – electrical or infra-red accelerators are electrical appliances that deliver a heat source suitable for accelerating the processing time for perms. To be used only if stated in the manufacturers’ instructions for perming products
- Products to include:
  - Range of suitable shampoos
  - Range of perming solutions – available depending on hair classification, type and condition
  - Neutralising agents – are complimentary to the perming solution to fix the curl in place
  - Barrier cream to protect the hairline and scalp from the effects of skin sensitiveness
  - Pre and post perm treatments/anti-oxy post perming conditioners/treatments – to restore the hair’s pH
- Examples may include:

Type of perming product	Product features	When to apply/ Pre or Post damping	How to apply	Special features/ suitable hair types
Barrier cream	Cream used to protect the skin around the hairline from perm lotion	Apply to the hairline after the client is gowned	Apply with a cotton bud, avoid contact with the hair	N/A
Pre-perm shampoo	Shampoo that removes product build-up and has no conditioning agents that would cause a barrier to perming	After the consultation, before winding. Use with tepid water to avoid sensitising the scalp	Shampoo the hair according to the manufacturers’ instructions	Some shampoo brands are mildly alkaline to prepare the cuticle for the perming service
Cold wave	Alkaline perm with a pH of around 9.5. Use for all hair types. Produces firm curl with long-lasting effects. Suitable for all	Most appropriate for post-damping. Pre-damp according to hair length, resistant areas and where	Either directly from the applicator bottle or decanted into a bowl and applied with cotton wool,	Most brands have varying strengths for differing hair types; typically, for normal, coloured and resistant hair.

	winding techniques. Lotion ready to use straight from the bottle	winding speed is quick	sponge or a brush	Additional heat is normally not required
Acid wave	Acid perm with a pH of around 6-7. Use for fine, delicate or porous hair and sensitised hair. Softer curl effect. 2 part lotion that needs to be mixed to activate, immediately prior to its application	Most suitable for post-damping. Discard any remaining lotion, it will lose its potency	Either directly from the applicator bottle or decanted into a bowl and applied with cotton wool, sponge or a brush	Some brands have a combination of strengths for sensitised hair types. Longer processing time than alkaline perm. Requires the use of additional heat such as an electrical accelerator
Exothermic	Self-heating perm. Lotion heats once the reagents are mixed together. Suitable for all hair types. 2 part lotion that needs to be mixed to activate, immediately prior to application. Tends to produce firm curl results	Post-damp	Directly from the applicator bottle. Discard any remaining lotion, it will lose its potency	They can be a mixture of acid and alkaline or acid/alkaline depending on the manufacturer. Most brands have varying strengths for differing hair types; typically, for normal, coloured and resistant hair. Self-heating
Semi or demi wave	Weak form of lotion provides effects lasting 6-8 weeks after which the hair can be reprocessed. Used to give body to the hair rather than curl. Liquid packaged ready to use	As per manufacturers' instructions	Either directly from the applicator bottle or decanted into a bowl and applied with cotton wool, sponge or a brush	Most brands have two strengths, normal or coloured hair
Neutralisers	Cream, foam or liquid products packaged either ready to use or	Applied after perm lotion has been rinsed away and the	Application varies according to brand. Typically, ready	Timings for the development vary according to the product.

	will require dilution. Refer to manufacturers' instructions for use, especially for dilution and timings	water blotted dry. Applied to wound rods	to use neutraliser is brought to a foam-like consistency by using a sponge and applied to wound rods	Generally ready to use neutralisers take five minutes to develop. Some neutralisers are 'instant fix'. This product requires dilution into a large applicator bottle and once rinsed into the wound hair the neutralising process is complete
Post-perm conditioner	pH balanced to close the cuticle to retain the strength of the hair after perming services	Apply to the lengths of the hair once all traces of neutraliser have been rinsed away and excess water has been squeezed from the hair	Apply from the palms of the hands	Has an antioxidant action to halt the oxidation process of the neutraliser

## **The importance of following salon and manufacturers' instructions during perming, neutralising and chemical rearranging services**

### **Taught content to include**

- To ensure the correct perming solution is chosen for client's hair type
- To ensure the perming product application method is appropriate following manufacturers' instructions i.e. some winding methods will vary. Examples will include:
  - Pre-damping with product
    - If condition allows and winding speed is quick, long hair can be pre-damped. Post-damping long hair can lead to problems, as the lotion penetration from outside of the rod to the inner centre is difficult and may result in an uneven curl result or straight ends
    - Processing time is calculated within the winding time
    - The considerations for pre-damping are the time it takes to wind the perm. If winding speed is slow, the perm may over-process
    - To wear non-latex gloves when pre-damping
    - Some acid perms recommend pre-damping
    - Pre-damping is useful when perming resistant hair
    - Resistant areas such as the nape hair should be wound first as they take longer to process
    - The top section of hair should be wound last as this processes the fastest
  - Post-damping with product:
    - The time taken in winding does not affect the overall processing time
    - The overall processing time will be longer than with pre-damping
    - Gloves need not be worn for winding the perm but are required for the product application
    - Post-damping is advantageous for winding methods that take additional time
    - Most suitable for alkaline perms
- The importance of following manufacturer's instructions regarding accurate timings for the perming and neutralising process to avoid under-processing or over-processing of the perm or neutralising stage
- To achieve the best results
- Prevent hair or scalp damage
- To prevent legal proceedings
- To present a professional image



## The types, causes and ways of dealing with perming, neutralising and chemical rearranging problems that may occur

### Taught content to include

- The importance of rinsing the hair with water to stop the action of the perming process
- The importance of immediately rinsing once the curl has developed
- The importance of the neutralising stage to include:
  - The importance of using rinsing methods that reach all wound rods
  - The timings for rinsing to ensure all perm lotion has been rinsed away – refer to manufacturers' instructions
  - Checks to ensure all perm lotion has been rinsed away – use of detector paper
  - The importance of correct water temperature e.g. too hot water may burn a sensitised scalp
  - The importance of rinsing away all neutraliser from the hair e.g. remaining neutraliser could lead to hair and scalp damage
  - Ensuring the wound hair has been blotted dry after rinsing and prior to neutralising
  - The correct methods of protection for the client to stop neutraliser dripping onto the skin
  - Ensure that all rods are neutralised e.g. nape of neck/hard to reach areas
  - To ensure each rod is saturated with neutraliser
  - To firmly apply neutraliser into the root area
  - To adhere to manufacturers' instructions for timing of the neutralising process
  - To adhere to manufacturers' instructions for applying neutraliser to the ends of the hair once rods have been removed
- The importance of restoring the pH balance on the structure of the hair after perming and neutralising to include:
  - The effect of pH balancing on the structure of the hair after the perming and neutralising process
  - Products to use to pH balance the hair
  - Consequences of failing to restore the pH balance of the hair
- Examples of causes/problems, dealing with the problem and avoidance may include:

Perming problem	Cause	Dealing with problem	How to avoid
Hair/scalp damage, breakage of hair	<ul style="list-style-type: none"> <li>• Hair wound with too much tension</li> <li>• Bands placed too tightly or too close to the root</li> <li>• Hair over-processed or chemicals too strong</li> <li>• Over-lapping</li> </ul>	<ul style="list-style-type: none"> <li>• Apply restructurant or remedial conditioning treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Wind with less tension</li> <li>• Secure bands across the top of the wound rod</li> <li>• Monitor processing time closely</li> <li>• Select lotion that is suitable for the hair type and condition</li> <li>• Ensure perming products do not overlap previously processed hair</li> </ul>

Pull burn	<ul style="list-style-type: none"> <li>• Perm lotion entering the hair follicle due to excessive tension or incomplete rinsing of perming lotion from the hair</li> </ul>	<ul style="list-style-type: none"> <li>• First aid assistance for chemical burns</li> <li>• If serious, refer for medical assistance</li> </ul>	<ul style="list-style-type: none"> <li>• Use less tension when winding and take smaller sections to avoid pulling the root area of the hair</li> </ul>
Sore hairline or skin irritation	<ul style="list-style-type: none"> <li>• Perming products in contact with the skin or barrier cotton wool soaked in perming products and left in contact with the skin</li> </ul>	<ul style="list-style-type: none"> <li>• Consult with client to ascertain possible allergic reaction</li> <li>• First aid assistance for chemical burns</li> <li>• If serious, refer for medical assistance</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure the lotion does not saturate the scalp</li> <li>• Renew cotton wool after damping</li> </ul>
Straight frizz	<ul style="list-style-type: none"> <li>• Perming products too strong or over-processing</li> <li>• Too much tension when winding</li> </ul>	<ul style="list-style-type: none"> <li>• Apply restructurant or remedial conditioning treatment</li> <li>• Cut the ends to reduce frizz</li> </ul>	<ul style="list-style-type: none"> <li>• Select lotion that is suitable for the hair type and condition</li> <li>• Monitor processing time closely</li> <li>• Wind with less tension</li> </ul>
Permed effect too curly	<ul style="list-style-type: none"> <li>• Rods too small or perming product too strong</li> </ul>	<ul style="list-style-type: none"> <li>• If hair condition allows, reduce the curl by relaxing</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure appropriate rods are used</li> <li>• Use appropriate perming product for hair type and condition</li> </ul>
No permed result	<ul style="list-style-type: none"> <li>• Perming product too weak for the hair type and condition</li> <li>• Curlers too large</li> <li>• Incorrect neutralising</li> <li>• Hair under processed</li> </ul>	<ul style="list-style-type: none"> <li>• If condition allows, re-perm with suitable perming products</li> </ul>	<ul style="list-style-type: none"> <li>• Use appropriate perming product and rods</li> <li>• Process perm and neutralise in line with manufacturers' instructions</li> </ul>
Fish-hooked ends	<ul style="list-style-type: none"> <li>• Hair points incorrectly wrapped around rod</li> <li>• Hair points not enclosed in end paper</li> </ul>	<ul style="list-style-type: none"> <li>• Remove fish-hooks by cutting</li> </ul>	<ul style="list-style-type: none"> <li>• Use end paper to enclose the points of the hair and ensure the ends are not bent back on</li> </ul>

			themselves when winding
Perm weakens or 'drops'	<ul style="list-style-type: none"> <li>• Incorrect neutralising</li> <li>• Hair overstretched when styling the finished effect</li> </ul>	<ul style="list-style-type: none"> <li>• If condition allows, re-perm with suitable perming products</li> </ul>	<ul style="list-style-type: none"> <li>• Neutralise in line with manufacturers' instructions</li> <li>• Use styling methods that do not overstretch the hair</li> </ul>
Hair has good movement when wet, poor when dry	<ul style="list-style-type: none"> <li>• Incorrect neutralising</li> <li>• Hair stretched when styling the finished effect</li> <li>• Over-processed</li> </ul>	<ul style="list-style-type: none"> <li>• If condition allows, re-perm with suitable perming products (other than over processed hair)</li> <li>• Use restructurant or remedial conditioning treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Neutralise in line with manufacturers' instructions</li> <li>• Use styling methods that do not overstretch the hair</li> </ul>
Uneven curl	<ul style="list-style-type: none"> <li>• Uneven winding techniques</li> <li>• Uneven winding tension</li> <li>• Lotion application is uneven</li> <li>• Incorrect neutralising</li> </ul>	<ul style="list-style-type: none"> <li>• If condition allows, re-perm affected areas with suitable perming products</li> </ul>	<ul style="list-style-type: none"> <li>• Check winding before applying perming products or neutralise</li> </ul>
Straight pieces	<ul style="list-style-type: none"> <li>• Lotion application uneven</li> <li>• Rods too large</li> <li>• Hair detaches from the rod</li> </ul>	<ul style="list-style-type: none"> <li>• If condition allows, re-perm affected areas with suitable perming products</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure lotion application is even</li> <li>• Check winding before applying the perming products</li> </ul>
Band marks	<ul style="list-style-type: none"> <li>• Perm bands incorrectly placed when fastening the rod</li> </ul>	<ul style="list-style-type: none"> <li>• Use restructurant or remedial conditioning treatment</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure correct placement of the band</li> <li>• Use spacers</li> </ul>

### The importance of using products cost effectively

#### Taught content to include

- Following manufacturers' instructions to ensure correct products are used and prevent wastage
- Effects on the environment to include:
  - The application of products in a well ventilated area
  - The safe disposing of unwanted perming or neutralising products
- Following salon and organisation policy when using perming and neutralising products

**The importance of providing clients with advice and recommendation on the service(s) provided and products available**

Taught content to include

- To provide longevity of the perming service
- Time intervals between services/maintenance services
- To help clients maintain the style and condition at home using specific homecare products
- Reputation and walking advertisement for the salon
- Suggesting other services to enhance the perming service
- Referring to and completing a client record card so that a history of products and services are available for future reference

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# Unit requirements

Learners are required to complete all assessment requirements related to this unit:

1. Service portfolio
2. Theory examination

## 1. Service portfolio

Learners must produce a service portfolio which is required to be completed under the supervision of a lecturer who must monitor the quality of the services performed throughout the learners' training.

The performance of learning outcome 1 must be demonstrated as part of all technical observations and will be recorded on **at least three observations**. This should be conducted on a range of new and existing clients and include the following perm winding techniques: brick wind, directional wind, and nine section wind.

The service portfolio must be completed and marked prior to the learner completing the theory examination.

## 2. Theory examination

Learners must complete a theory examination for this unit. This will consist of a multiple choice question paper.

The theory examination will test knowledge and understanding from across learning outcomes 2, 3, 4 and 5. Learners should use the unit content sections of this unit to aid revision.

### Document History

Version	Issue Date	Changes	Role
v1	01/08/2018	First Published	Qualifications Manager
v2	14/02/2019	Update to ITEC branding as primary colour and logo	Qualifications Administrator