sulphate in *sulphuric acid (25%)* and titrate immediately with 0.1M *ammonium cerium(IV) nitrate VS* using *ferroin solution* as indicator (n_1 ml). Pass slowly through the column 200 ml of 0.5M *sulphuric acid* followed by 20 ml of solution A, wash with 100 ml of 0.5M *sulphuric acid* followed by 100 ml of *water*. Collect the combined eluates in a flask containing 50 ml of a 15% w/v solution of *ammonium iron(III) sulphate* in *sulphuric acid (25%)* and titrate immediately with 0.1M *ammonium cerium(IV) nitrate VS* using *ferroin solution* as indicator (n_2 ml). Calculate the percentage content of TiO_2 from the expression $3.99(n_2-n_1)/w$ where w is the weight, in g, of the substance being examined taken to prepare solution A.

Calculate the percentage content of TiO_2 in the adhesive mass by multiplying the percentage content of TiO_2 in the bandage by the Weight per unit area and dividing by the Weight of adhesive mass.

Adhesiveness Complies with the tests, Appendix XX H, but using a force of 0.5 N per cm width (50 g per cm width) for Test 1. The average force required in Test 2 is not less than 0.5 N per cm width (50 g per cm width).

Water-vapour permeability Not less than 500 g m^{-2} per 24 hours, Appendix XX J1.

Weight of adhesive mass Not less than 72 g m^{-2}, Appendix XX D3, using Method II of Appendix XX D2.

Labelling If the dressing has been dyed, the label on the unit container, the label on the shelf container and the label on the outer transit container state the colour of the final dressing.

Ventilated Elastic Adhesive Bandage

Ventilated Zinc Oxide Elastic Adhesive Bandage

Definition Ventilated Elastic Adhesive Bandage consists of a woven fabric, elastic in the warp, which has been spread evenly with an adhesive mass containing Zinc Oxide so that it has regular strips of unspread fabric along its length and which does not offset when the bandage is unrolled. The area of the spread portion, excluding any margin, is not less than 50% of the total area. The warp threads consist of twofold cotton threads with a count after crêpe-twisting not finer than 45 tex, each containing not less than 17 folding turns per cm, arranged two threads S-twist, two threads Z-twist, repeated. The weft threads consist of (a) cotton or (b) viscose or (c) combined cotton and viscose yarn, with a count not finer than 70 tex. The fabric is clean and reasonably free from weaving defects and contains not more than traces of leaf residue, seed coat and other impurities. It is in one continuous length with no joins.

Ventilated Elastic Adhesive Bandage may be dyed.

Content of zinc oxide in the adhesive mass Not less than 10.0%, Appendix XX Q.

Fibre identification After removal of the adhesive mass, complies with the tests for *cotton* or for both *cotton* and *viscose*, Appendix XX A.

Elasticity The regain length is not more than 80% of the fully-stretched length, Appendix XX F.

Threads per 10 cm Warp, not less than 170, Appendix XX C1, Method III; weft, not less than 78, Appendix XX C2.

Weight of adhesive mass Not less than 120 g m^{-2}, calculated with reference to the spread area of the bandage, Appendix XX D3, using Method II of Appendix XX D2.

Weight of fabric Not less than 130 g m^{-2}, Appendix XX D2, Method II.

Labelling If the bandage has been dyed, the label on the unit container, the label on the shelf container and the label on the outer transit container state the colour of the final bandage.

TUBULAR BANDAGES

Elasticated Tubular Bandage

Definition Elasticated Tubular Bandage consists of knitted fabric of 1:1 ribbed structure, in tubular form, into which elasticated threads comprising a core of 50's rubber, double-covered with multifilament crimped polyamide or polyester, are laid in the ratio of one elasticated thread to two or more courses of singles yarn spun from cotton or a blend of cotton and viscose fibres. It is manufactured on a circular knitting machine. The fabric is reasonably free from knitting defects and contains not more than slight traces of cotton leaf, shell and other impurities.

Lengths up to 5 m have no joins; lengths of more than 5 m contain not more than one join per additional 10 m.

Elasticated Tubular Bandage may be dyed.

Fibre identification Complies with the tests (a) for *cotton* or for both *cotton* and *viscose*, (b) for *polyamide 6* or for *polyamide 6/6* or for *polyester* and (c) for *rubber*, Appendix XX A.

Content of viscose Not more than 50% when determined by Method 3 of British Standard 4407:1975 (Methods of test: Quantitative analysis of fibre mixtures).

Courses per 10 cm Complies with the appropriate requirements given in the Table. The fabric should be at its nominal lay-flat width.

Elasticity The regain width is not more than one third of the fully-stretched width, Appendix XX F, Method II.

Ratio of elasticated threads Complies with the appropriate requirement given in the Table.

Total number of wales Complies with the appropriate requirement given in the Table.

Weight per unit area Not less than 265 g m^{-2}, Appendix XX D1, Method II. For the purpose of calculation, the unstretched width is determined by measuring the lay-flat width and then doubling this value.

Fluorescence When examined under ultraviolet light (365 nm) the tubular bandage may display a slight brownish violet fluorescence and a few yellow particles. Not more than a few isolated fibres show an intense blue fluorescence.

Water-soluble substances Not more than 3.0%, Appendix XX M.

Labelling The label on the package states (1) the nominal lay-flat width; (2) where more than one type of tubular bandage with the same nominal lay-flat width is available, a reference to the appropriate type; (3) the colour of the final bandage if the bandage has been dyed.

	Nominal lay-flat width cm	Courses per 10 cm	Total number of wales	Ratio of elasticated threads
	3.7	67 to 83	120	1:2
	4.5	68 to 76	200	1:4
	5.0	61 to 67	300	1:3
Type A	6.25	56 to 64	360	1:2
Type B	6.25	64 to 72	284	1:4
Type A	6.75	64 to 72	360	1:4
Type B	6.75	64 to 72	360	1:3
Type A	7.5	68 to 76	348	1:4
Type B	7.5	68 to 76	360	1:4
Type A	8.75	68 to 76	400	1:4
Type B	8.75	68 to 76	440	1:4
Type A	10.0	76 to 84	440	1:4
Type B	10.0	75 to 83	400	1:4
Type A	12.0	76 to 84	552	1:4
Type B	12.0	75 to 83	440	1:4
Type A	17.5	76 to 84	1008	1:4
Type B	17.5	76 to 84	800	1:4
Type C	17.5	75 to 87	636	1:4
	20.0	56 to 64	1150	1:4
Type A	21.5	56 to 64	1248	1:3
Type B	21.5	71 to 87	888	1:4
	30.0	88 to 96	1368	1:4
Type A	32.5	88 to 96	1696	1:4
Type B	32.5	88 to 96	1872	1:4
Type C	32.5	71 to 87	1196	1:4

WOUND DRESSINGS AND MEDICATED BANDAGES

Chlorhexidine Gauze Dressing

Chlorhexidine Tulle Gras

Definition Chlorhexidine Gauze Dressing consists of fabric of leno weave with two picks in each shed in which the warp and weft threads consist of (a) cotton or (b) viscose or (c) combined cotton and viscose yarn. The fabric has been evenly impregnated with a suitable ointment containing a dispersion of Chlorhexidine Acetate.

The dressing is supplied sterile in single pieces.

Fabric

Fibre identification The extracted fabric, obtained in the test for Ether-soluble substances, complies with the tests for *cotton* or for *viscose* or for both *cotton* and *viscose*, Appendix XX A.

Threads per 10 cm Warp, not less than 74; weft, not less than 80, Appendix XX C1, Method I, when determined on the impregnated fabric.

Weight per unit area Not less than 39 g m^{-2} when determined by the following method. Remove the dressing from the container and determine its area. Transfer it by means of forceps to an apparatus for the *continuous extraction of drugs*, Appendix XI F, leaving behind any ointment adhering to the facing material, and extract the dressing with *ether* for 6 hours or until extraction is complete. Reserve the ether solution for the test for Ether-soluble substances. Remove the extracted fabric from the apparatus and dry it to constant weight at 105°. Calculate the weight per unit area of the fabric in g m^{-2}.

Ointment

Content of chlorhexidine acetate, $C_{22}H_{30}Cl_2N_{10}$, $2C_2H_4O_2$ 0.4 to 0.6% w/w.

Identification Shake a quantity of the dressing containing 10 mg of Chlorhexidine Acetate with 10 ml of *chloroform*. Add 10 ml of *water* and 2 ml of a 20% w/v solution of *cetrimide* followed by 1 ml of a 1% w/v solution of *bromine* in 10M *sodium hydroxide* and shake. A deep red colour is produced in the aqueous layer.

Ether-soluble substances Not less than 100 g m^{-2} when determined by the following method. Evaporate the ether solution reserved in the test for Weight per unit area of the fabric and dry the residue to constant weight at 105°. Divide the weight of the residue by the area taken for the test.

Assay Carefully remove and weigh 100 cm^2 of dressing. Shake with 25 ml of *chloroform* for 2 minutes, add 100 ml of 0.4M *hydrochloric acid* and shake continuously for 45 minutes. Discard the chloroform layer and filter the acid layer.

Wash the extracted fabric with hot *water* to remove all traces of the ointment and dry the fabric to constant weight at 105°. Determine the weight of the ointment from the initial weight of the dressing.

To 20 ml of the filtrate add 50 ml of *water* and 5 ml of a 20% w/v solution of *cetrimide* and shake. Add 8.5 ml of 1M *sodium hydroxide*, 1 ml of *propan-2-ol* and 2 ml of *sodium hypobromite solution*, dilute to 100 ml with *water* and shake. Allow to stand at 20° for 25 minutes. Measure the *absorbance* of the resulting solution at the maximum at 480 nm, Appendix II B. Calculate the content of $C_{22}H_{30}Cl_2N_{10},2C_2H_4O_2$ in the ointment from the *absorbance* obtained by repeating the procedure using 20 ml of a solution prepared by diluting 5 ml of a 0.12% w/v solution of *chlorhexidine acetate* in *water* to 100 ml with 0.4M *hydrochloric acid* beginning at the words 'add 50 ml of *water* ...'. Use 0.4M *hydrochloric acid* in the reference cell.

Sterility Complies with the *test for sterility*, Appendix XVI A, with the following modifications. Use Method II: Direct Inoculation. Using aseptic precautions open a sufficient number of individual packages to provide an appropriate number of 'portions' as defined in Table III, treating each portion separately as follows. Transfer the portion to a container containing 200 ml of sterile isopropyl myristate that has been shown not to have antimicrobial properties under the conditions of the test, mix thoroughly and heat to a temperature not exceeding 40°. Maintain the contents of the container at this temper-