

The drug may also be given via a nebuliser in severe chronic asthma. Usual adult doses are 0.5 to 2 mg twice daily. Children aged 4 to 16 years may be given 1 mg twice daily. In the USA, doses by powder inhalation are similar to that in the UK. The aerosol inhalation formulations contain 50, 125, or 250 micrograms of fluticasone propionate in each metered spray, which delivers 44, 110, or 220 micrograms, respectively from the actuator. Doses are therefore expressed in these units; dosage ranges from 88 micrograms twice daily to 880 micrograms twice daily, depending on previous therapy. Children aged 4 to 11 years are given 88 micrograms twice daily.

Fluticasone propionate is also available in some countries as a powder or aerosol inhalation for the treatment of **chronic obstructive pulmonary disease**, when it is given in doses of 500 micrograms twice daily.

Fluticasone is administered by nasal spray in the prophylaxis and treatment of **allergic rhinitis**. The usual dose of fluticasone propionate is 100 micrograms into each nostril once daily, increased if necessary to 100 micrograms into each nostril twice daily. Children over 4 years of age may be given half these doses. Fluticasone furoate is also used in the management of allergic rhinitis. This salt has enhanced affinity for the glucocorticoid receptor, and is given in a starting dose of 55 micrograms into each nostril once daily. When the maximum benefit has been achieved and symptoms controlled, the dose should be gradually reduced to the minimum effective dose; 27.5 micrograms into each nostril once daily may be sufficient to maintain control of symptoms. Children aged 2 years and over may be started on 27.5 micrograms into each nostril once daily, which may be increased to 55 micrograms into each nostril once daily if necessary to control symptoms.

Fluticasone propionate drops are used in the treatment of **nasal polyps**, 200 micrograms should be instilled into each nostril once or twice daily for at least 4 to 6 weeks.

Fluticasone propionate is applied topically in the treatment of various **skin disorders**. Creams and ointments containing 0.05% and 0.005%, respectively are available. For recommendations concerning the correct use of corticosteroids on the skin, see p.1497.

Asthma. Corticosteroids and beta₂-adrenoceptor agonists form the cornerstone of the management of asthma (p.1108). Patients requiring only occasional relief from symptoms may be managed with an inhaled short-acting beta₂ agonist, and an inhaled corticosteroid such as fluticasone is added if symptomatic relief is needed more than once daily. In more severe asthma other drugs may be added (combination with a long-acting beta₂ agonist may have synergistic benefits), or the dose of inhaled corticosteroid may be increased.

Some references to the use of fluticasone propionate for asthma are given below,¹⁻¹⁵ including one to a study indicating that increasing the dose of inhaled fluticasone did not produce increased benefit.¹

- Boe J, *et al.* High-dose inhaled steroids in asthmatics: moderate efficacy gain and suppression of the hypothalamic-pituitary-adrenal (HPA) axis. *Eur Respir J* 1994; **7**: 2179-84.
- Jarvis B, Faulds D. Inhaled fluticasone propionate: a review of its therapeutic efficacy at dosages \leq 500 micrograms/day in adults and adolescents with mild to moderate asthma. *Drugs* 1999; **57**: 769-803.
- Bisgaard H, *et al.* The effect of inhaled fluticasone propionate in the treatment of young asthmatic children: a dose comparison study. *Am J Respir Crit Care Med* 1999; **160**: 126-31.
- Markham A, Jarvis B. Inhaled salmeterol/fluticasone propionate combination: a review of its use in persistent asthma. *Drugs* 2000; **60**: 1207-33.
- ZuWallack R, *et al.* Long-term efficacy and safety of fluticasone propionate powder administered once or twice daily via inhaler to patients with moderate asthma. *Chest* 2000; **118**: 303-312.
- Holt S, *et al.* Dose-response relation of inhaled fluticasone propionate in adolescents and adults with asthma: meta-analysis. *BMJ* 2001; **323**: 253-6.
- Purucker ME, *et al.* Inhaled fluticasone propionate by diskus in the treatment of asthma: a comparison of the efficacy of the same nominal dose given either once or twice a day. *Chest* 2003; **124**: 1584-93.
- Masoli M, *et al.* Clinical dose-response relationship of fluticasone propionate in adults with asthma. *Thorax* 2004; **59**: 16-20.

- Masoli M, *et al.* Systematic review of the dose-response relation of inhaled fluticasone propionate. *Arch Dis Child* 2004; **89**: 902-7.
- Adams NP, *et al.* Fluticasone at different doses for chronic asthma in adults and children. Available in The Cochrane Database of Systematic Reviews; Issue 3. Chichester: John Wiley; 2005 (accessed 12/05/06).
- Adams NP, *et al.* Fluticasone versus placebo for chronic asthma in adults and children. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 2005 (accessed 12/05/06).
- Reynolds NA, *et al.* Inhaled salmeterol/fluticasone propionate: a review of its use in asthma. *Drugs* 2005; **65**: 1715-34.
- Lasserson TJ, *et al.* Fluticasone versus HFA-beclomethasone dipropionate for chronic asthma in adults and children. Available in The Cochrane Database of Systematic Reviews; Issue 2. Chichester: John Wiley; 2006 (accessed 12/05/06).
- Guilbert TW, *et al.* Long-term inhaled corticosteroids in pre-school children at high risk for asthma. *N Engl J Med* 2006; **354**: 1985-97.
- Adams N, *et al.* Fluticasone versus beclomethasone or budesonide for chronic asthma in adults and children. Available in The Cochrane Database of Systematic Reviews; Issue 4. Chichester: John Wiley; 2007 (accessed 22/08/08).

Chronic obstructive pulmonary disease. For discussion of the value of inhaled corticosteroids in chronic obstructive pulmonary disease, including reference to the use of fluticasone, see p.1501.

Reviews.

- Fenton C, Keating GM. Inhaled salmeterol/fluticasone propionate: a review of its use in chronic obstructive pulmonary disease. *Drugs* 2004; **64**: 1975-96.
- Keating GM, McCormack PL. Salmeterol/fluticasone propionate: a review of its use in the treatment of chronic obstructive pulmonary disease. *Drugs* 2007; **67**: 2383-2405.

Cough. A small study in children with persistent nocturnal cough compared fluticasone propionate 1 mg twice daily for 3 nights, followed by 500 micrograms twice daily for 11 nights, given by metered-dose inhaler, with placebo. Coughs reduced significantly by nights 15 and 16 in the children given the corticosteroid. However, both groups improved significantly compared to baseline, leading the authors to conclude that inhaled corticosteroids should not be given at the time of presentation of persistent nocturnal cough. If they are given, then a 2-week course of high dose corticosteroids may benefit some children.¹ In a controlled crossover study in adult patients with chronic cough, inhaled fluticasone 500 micrograms twice daily for 14 days significantly improved certain measurements of cough, although overall reduction in cough severity was modest.² In adults with a cough lasting more than 2 weeks, fluticasone 500 micrograms twice daily for 2 weeks decreased cough scores from day 5 onwards in non-smokers.³

- Davies MJ, *et al.* Persistent nocturnal cough: randomised controlled trial of high dose inhaled corticosteroid. *Arch Dis Child* 1999; **81**: 38-44.
- Chaudhuri R, *et al.* Effect of inhaled corticosteroids on symptom severity and sputum mediator levels in chronic persistent cough. *J Allergy Clin Immunol* 2004; **113**: 1063-70.
- Ponsioen BP, *et al.* Efficacy of fluticasone on cough: a randomised controlled trial. *Eur Respir J* 2005; **25**: 147-52.

Eczema. In a study in patients with moderate to severe eczema (p.1579), fluticasone propionate 0.05% cream or 0.005% ointment was applied once or twice daily for 4 weeks; if eczema stabilised, either the cream, the ointment, or an emollient placebo was then applied on 2 days per week, for up to 16 weeks. Fluticasone cream reduced the risk of relapse to about one-sixth of that of placebo, whereas the ointment formulation reduced the risk to about half; median times to relapse were similar for both fluticasone formulations. The formulations were originally expected to be of similar potency.¹ Others have commented² that caution should be exercised in generalising these results to primary care settings where most cases of eczema are likely to be mild, and relapses infrequent.

- Berth-Jones J, *et al.* Twice weekly fluticasone propionate added to emollient maintenance treatment to reduce risk of relapse in atopic dermatitis: randomised, double blind, parallel group study. *BMJ* 2003; **326**: 1367.
- Williams HC. Twice-weekly topical corticosteroid therapy may reduce atopic dermatitis relapses. *Arch Dermatol* 2004; **140**: 1151-2.

Inflammatory bowel disease. Fluticasone propionate, given orally, has produced variable results in the treatment of Crohn's disease¹ and ulcerative colitis;^{2,3} some benefit was also reported in coeliac disease.⁴ The dose was 5 mg four times daily but some consider² higher doses necessary.

For a review of the management of inflammatory bowel disease, including the role of corticosteroids, see p.1697.

- Carpani de Kaski M, *et al.* Fluticasone propionate in Crohn's disease. *Gut* 1991; **32**: 657-61.
- Hawthorne AB, *et al.* Double blind trial of oral fluticasone propionate v prednisolone in the treatment of active ulcerative colitis. *Gut* 1993; **34**: 125-8.
- Angus P, *et al.* Oral fluticasone propionate in active distal ulcerative colitis. *Gut* 1992; **33**: 711-14.
- Mitchison HC, *et al.* A pilot study of fluticasone propionate in untreated coeliac disease. *Gut* 1991; **32**: 260-5.

Nasal polyps. For discussion of the value of corticosteroids in the treatment of nasal polyps, including reference to the use of fluticasone, see p.1508.

Rhinitis. For a discussion of the management of rhinitis, including the use of corticosteroids, see p.565. Some further references to the use of fluticasone in rhinitis are given below.

- Wiseman LR, Benfield P. Intranasal fluticasone propionate: a reappraisal of its pharmacology and clinical efficacy in the treatment of rhinitis. *Drugs* 1997; **53**: 885-907.
- McCormack PL, Scott LJ. Fluticasone furoate: intranasal use in allergic rhinitis. *Drugs* 2007; **67**: 1905-15.

Preparations

BP 2008: Fluticasone Cream; Fluticasone Nasal Spray; Fluticasone Ointment.

USP 31: Fluticasone Propionate Nasal Spray.

Proprietary Preparations (details are given in Part 3)

Arg.: Cutivate; Flixonase; Flitoxide; Fluti-K; Fluticort; Lidil Cort; Proair; Rinisona. **Austral.:** Avamys; Becanase Allergy; Flixonase; Flitoxide; **Austria:** Cutivate; Flixonase; Flitoxide. **Belg.:** Cutivate; Flixonase; Flitoxide. **Braz.:** Flixonase; Flitoxide; Fluticaps; Flutivate; Plurair; **Canad.:** Cutivate; Flonase; Flovent; **Chile:** Albeoler; Brexona; Brexovent; Flixonase; Flitoxide; Flusona; Flutivate; Nebulex; Raffonin. **Cz.:** Alergonase; Avamys; Cutivate; Flixonase; Flitoxide; Nasofan; **Denm.:** Cutivate; Flixonase; Flitoxide. **Fin.:** Flixonase; Flitoxide. **Fr.:** Flixonase; Flitoxide; Flivoxat; **Ger.:** Atemur; Flutide; Flutivate; **Gr.:** Alerxem; Cortixide; Dermocort; Flizacen; Flihaler; Flitocort; Flitoderm; Flixonase; Flitoxide; Flucortis; Flutinasal; Flutizal; Ybecor. **Hong Kong:** Cutivate; Flixonase; Flitoxide; **Hung.:** Cutivate; Flixonase; Flitoxide; Flutinin; **India:** Flohale; Flomist; Zoflut; **Indon.:** Cutivate; Flixonase; Flitoxide; Medicort; **Irl.:** Flixonase; Flitoxide; Nasofan; **Israel:** Allegro; Cutivate; Flixonase; Flitoxide; **Ital.:** Flitoderm; Flixonase; Flitoxide; Fluspiral; Tricavet; **Jpn.:** Flonase; **Malaysia:** Cutivate; Flixonase; Flitoxide; **Mex.:** Cutivate; Flixonase; Flitoxide; **Neth.:** Cutivate; Flixonase; Flitoxide; Flutide; **Norw.:** Flutide; Flutivate; **NZ:** Flixonase; Flitoxide; Nasaclear; **Philipp.:** Cutivate; Flitoxide; **Pol.:** Cutivate; Flixonase; Flitoxide; **Port.:** Asmatil; Asmo-Lavi; Brisovent; Cutivate; Eustidil; Flitoxide; Flutade; Rontilona; Ubizol; **Rus.:** Cutivate (Кутивейт); Flitonase (Флитоназе); Flitoxide (Флитоксид); Seretide (Серетид); **S.Afr.:** Cutivate; Flixonase; Flitoxide; Flohale DP; Flomist; **Singapore:** Cutivate; Flixonase; Flitoxide; **Spain:** Drolasona; Flixonase; Flitoxide; Flunol; Flusonal; Inalacor; Rinosone; Rontilona; Trionala; **Swed.:** Flutide; **Switz.:** Axotide; Cutivate; Flutinas; **Thai:** Flixonase; Flitoxide; **Turk.:** Brethali; Cutivate; Flixonase; Flitoxide; **UAE:** Potencort; **UK:** Cutivate; Flixonase; Flitoxide; Nasofan; **USA:** Cutivate; Flonase; Flovent; Veramyst; **Venez.:** Cutivate; Flixonase; Flitoxide; Fluticort.

Multi-ingredient: **Arg.:** Flutivent; Neumotide; **Austria:** **Austral.:** Seretide; **Austria:** Seretide; Viani; **Belg.:** Seretide; **Braz.:** Seretide; **Canad.:** Advair; **Chile:** Aerometrol Plus; Aurituss; Brexotide; Seretide; **Cz.:** Duaspir; Seretide; **Denm.:** Seretide; **Fin.:** Seretide; **Fr.:** Seretide; **Ger.:** Anadis; Viani; **Gr.:** Seretide; Viani; **Hong Kong:** Seretide; **Hung.:** Seretide; Thoreus; **India:** Duonase; Forair; Seretide; Seroflo; **Indon.:** Seretide; **Irl.:** Seretide; **Israel:** Seretide; **Ital.:** Aliflus; Seretide; **Malaysia:** Seretide; **Mex.:** Seretide; **Neth.:** Seretide; Viani; **Norw.:** Seretide; **NZ:** Seretide; **Philipp.:** Seretide; **Pol.:** Seretide; **Port.:** Brisomax; Maizor; Seretide; Veraspis; **S.Afr.:** Seretide; **Singapore:** Seretide; **Spain:** Anasma; Brisair; Inaladuo; Plusvent; Seretide; **Swed.:** Seretide; **Switz.:** Seretide; **Thai:** Seretide; **Turk.:** Seretide; **UK:** Seretide; **USA:** Advair; **Venez.:** Seretide.

Formocortol (BAN, USAN, rINN) ⓧ

Fl-6341; Fluoroformylon; Formocortolam. 3-(2-Chloroethoxy)-9 α -fluoro-11 β ,21-dihydroxy-16 α ,17 α -isopropylidenedioxy-20-oxopregna-3,5-diene-6-carbaldehyde 21-acetate.

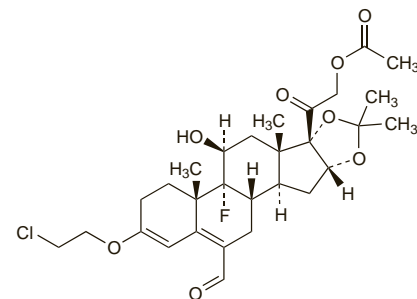
Формокортал

C₂₉H₃₈ClFO₈ = 569.1.

CAS — 2825-60-7.

ATC — S01BA12.

ATC Vet — QS01BA12.



Profile

Formocortol is a corticosteroid that is used for its glucocorticoid activity (see p.1490) in the treatment of inflammatory eye disorders as eye drops and eye ointments containing 0.05%.

Prolonged use of ophthalmic preparations containing corticosteroids has caused raised intra-ocular pressure and reduced visual function.

Preparations

Proprietary Preparations (details are given in Part 3)

Ital.: Formofil.

Multi-ingredient: **Ital.:** Formomicin.

Halcinonide (BAN, USAN, rINN) ⊗

Alcinonide; Halcinonid; Halcinónida; Halcinonidum; Halsinonid; Halsinonidi; SQ-18566. 21-Chloro-9 α -fluoro-11 β -hydroxy-16 α ,17 α -isopropylidenedioxypregn-4-ene-3,20-dione.

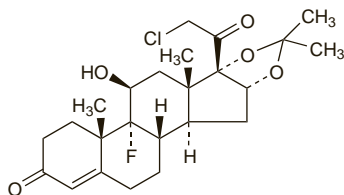
Гальцинонид

$C_{24}H_{32}ClFO_5 = 455.0$.

CAS — 3093-35-4.

ATC — D07AD02.

ATC Vet — QD07AD02.



Pharmacopoeias. In *Chin.* and *US*.

USP 31 (Halcinonide). A white to off-white, odourless, crystalline powder. Insoluble in water and in hexanes; slightly soluble in alcohol and in ether; soluble in acetone and in chloroform.

Profile

Halcinonide is a corticosteroid used topically for its glucocorticoid activity (p.1490) in the treatment of various skin disorders. It is usually used as a 0.1% cream, lotion, or ointment.

When applied topically, particularly to large areas, when the skin is broken, or under occlusive dressings, corticosteroids may be absorbed in sufficient amounts to cause systemic effects (p.1490). The effects of topical corticosteroids on the skin are described on p.1492. For recommendations concerning the correct use of corticosteroids on the skin, and a rough guide to the clinical potencies of topical corticosteroids, see p.1497.

Preparations

USP 31: Halcinonide Cream; Halcinonide Ointment; Halcinonide Topical Solution.

Proprietary Preparations (details are given in Part 3)

Austria: Halog; **Braz.:** Halog; **Canad.:** Halog; **Cz.:** Betacorton; **Ger.:** Halog†; **Hong Kong:** Halog; **India:** Cortilate; **Indon.:** Halog; **Ital.:** Halcidem; **Mex.:** Dermalog; **Spain:** Halog; **Switz.:** Betacortone; **Türk.:** Volog; **UK:** Halcidem†; **USA:** Halog; **Venez.:** Halog.

Multi-ingredient: **Cz.:** Betacorton S; Betacorton U; **Ger.:** Halog Tri†; **India:** Cobederm-H; Cortilate-S; **Ital.:** Anfocort; Halcidem; Halcidem Comb; **Mex.:** Dermalog-C; **Switz.:** Betacortone; Betacortone S; **Türk.:** Betacorton; **Venez.:** Halcomb; Halog.

Halometasone (rINN) ⊗

C-48401-Ba; Halometason; Halometasona; Halométašone; Halometasoni; Halometasonum; Halometazon; Halomethasone. 2-Chloro-6 α ,9-difluoro-11 β ,17,21-trihydroxy-16 α -methylpregna-1,4-diene-3,20-dione.

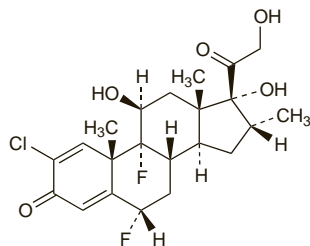
Галометазон

$C_{22}H_{27}ClF_2O_5 = 444.9$.

CAS — 50629-82-8.

ATC — D07AC12.

ATC Vet — QD07AC12.

**Profile**

Halometasone is a corticosteroid used topically for its glucocorticoid activity (p.1490) in the treatment of various skin disorders. It is usually used as a cream containing 0.05% of halometasone monohydrate.

When applied topically, particularly to large areas, when the skin is broken, or under occlusive dressings, corticosteroids may be absorbed in sufficient amounts to cause systemic effects (p.1490). The effects of topical corticosteroids on the skin are described on p.1492. For recommendations concerning the correct use of corticosteroids on the skin, see p.1497.

The symbol † denotes a preparation no longer actively marketed

Preparations

Proprietary Preparations (details are given in Part 3)

Austria: Sicorten; **Belg.:** Sicorten†; **Ger.:** Sicorten†; **Hong Kong:** Sicorten; **Neth.:** Sicorten†; **Port.:** Sicorten†; **Spain:** Sicorten; **Switz.:** Sicorten; **Türk.:** Sicorten.

Multi-ingredient: **Ger.:** Sicorten Plus; **Hong Kong:** Sicorten Plus†; **Israel:** Sicorten Plus†; **Port.:** Sicorten Plus†; **Spain:** Sicorten Plus; **Switz.:** Sicorten Plus; **Venez.:** Sicorten Plus†.

Hydrocortisone (BAN, rINN) ⊗

Anti-inflammatory Hormone; Compound F; Cortisol; Hidrocortisona; Hidrokortizon; Hidrokortizonas; Hydrocortisonum; Hydrokortison; Hydrokortisoni; Hydrokortyzon; 17-Hydroxycorticosterone; NSC-10483. 11 β ,17 α ,21-Trihydroxypregn-4-ene-3,20-dione.

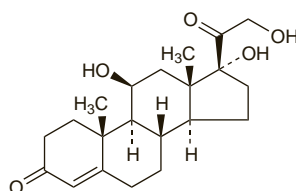
Гидрокортизон

$C_{21}H_{30}O_5 = 362.5$.

CAS — 50-23-7.

ATC — A01AC03; A07EA02; C05AA01; D07AA02; H02AB09; S01BA02; S02BA01.

ATC Vet — QA01AC03; QA07EA02; QC05AA01; QD07AA02; QD07XA01; QH02AB09; QS01BA02; QS01CB03; QS02BA01.



Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Int.*, *Jpn.*, and *US*.

Ph. Eur. 6.2 (Hydrocortisone). A white or almost white, crystalline powder. It shows polymorphism. Practically insoluble in water; sparingly soluble in alcohol and in acetone; slightly soluble in dichloromethane. Protect from light.

USP 31 (Hydrocortisone). A white to practically white, odourless, crystalline powder. Very slightly soluble in water and in ether; soluble 1 in 40 of alcohol and 1 in 80 of acetone; slightly soluble in chloroform. Store at a temperature of 25°, excursions permitted between 15° and 30°.

Hydrocortisone Acetate (BANM, rINNM) ⊗

Acetato de hidrocortisona; Cortisol Acetate; Hidrokortizon Asetat; Hidrokortizon-acetát; Hidrokortizon acetatas; Hydrocortisone, acetate d'; Hydrocortisoni acetat; Hydrokortisonacetat; Hydrokortisonasetaatti; Hydrokortizonu octan. Hydrocortisone 21-acetate.

Гидрокортизона Ацетат

$C_{23}H_{32}O_6 = 404.5$.

CAS — 50-03-3.

ATC — A01AC03; A07EA02; C05AA01; D07AA02; H02AB09; S01BA02; S02BA01.

ATC Vet — QA01AC03; QA07EA02; QC05AA01; QD07AA02; QH02AB09; QS01BA02; QS02BA01.

NOTE. HCOR is a code approved by the BP 2008 for use on single unit doses of eye drops containing hydrocortisone acetate where the individual container may be too small to bear all the appropriate labelling information.

Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Int.*, *Jpn.*, *US*, and *Viet*.

Ph. Eur. 6.2 (Hydrocortisone Acetate). A white or almost white, crystalline powder. Practically insoluble in water; slightly soluble in dehydrated alcohol and in dichloromethane. Protect from light.

USP 31 (Hydrocortisone Acetate). A white to practically white, odourless, crystalline powder. Insoluble in water; soluble 1 in 230 of alcohol and 1 in 200 of chloroform.

Hydrocortisone Buteptrate (BANM, rINNM) ⊗

Buteptrato de hidrocortisona; Hydrocortisone, Butéprate d'; Hydrocortisone Butyrate Propionate; Hydrocortisone Probutate (USAN); Hydrocortisoni Buteptras; TS-408. Hydrocortisone 17-butyrate 21-propionate.

Гидрокортизона Бутепрат

$C_{28}H_{40}O_7 = 488.6$.

CAS — 72590-77-3.

ATC — D07AB11.

ATC Vet — QD07AB11.

Hydrocortisone Butyrate (BANM, USAN, rINNM) ⊗

Butirato de hidrocortisona; Cortisol Butyrate; Hidrokortizon Bütirat; Hydrocortisone, Butyrate d'; Hydrocortisoni Butiras. Hydrocortisone 17 α -butyrate.

Гидрокортизона Бутират

$C_{25}H_{36}O_6 = 432.5$.

CAS — 13609-67-1.

ATC — D07AB02.

ATC Vet — QD07AB02.

Pharmacopoeias. In *Chin.*, *Jpn.*, and *US*.

USP 31 (Hydrocortisone Butyrate). A white to practically white, practically odourless crystalline powder. Practically insoluble in water; soluble in alcohol, in acetone, and in methyl alcohol; freely soluble in chloroform; slightly soluble in ether.

Hydrocortisone Cipionate (BANM, rINNM) ⊗

Cipionato de hidrocortisona; Cortisol Cypionate; Hydrocortisone, Cipionate d'; Hydrocortisone Cyclopentylpropionate; Hydrocortisoni Cypionate; Hydrokortisoni Cipionas. Hydrocortisone 21-(3-cyclopentylpropionate).

Гидрокортизона Ципионат

$C_{29}H_{42}O_6 = 486.6$.

CAS — 508-99-6.

ATC — A01AC03; A07EA02; C05AA01; D07AA02; H02AB09; S01BA02; S02BA01.

ATC Vet — QA01AC03; QA07EA02; QC05AA01; QD07AA02; QH02AB09; QS01BA02; QS02BA01.

Hydrocortisone Hydrogen Succinate

(BANM, rINNM) ⊗

Cortisol Hemisuccinate; Hydrogenosuccinato de hidrocortisona; Hidrokortizon-hidrogén-szükcinát; Hidrokortizon hemisukcinatas; Hydrocortisone Hemisuccinate; Hydrocortisone, Hémissuccinate d'; Hydrocortisone, hidrogénosuccinate d'; Hydrocortisone Succinate; Hydrocortisoni Hemisuccinas; Hydrocortisoni hydrogenosuccinas; Hydrokortison-hydrogen-sukcinát; Hydrokortisonivetyksuksinaatti; Hydrokortisonvatesuccinat. Hydrocortisone 21-(hydrogen succinate).

Гидрокортизона Гемисукцинат

$C_{25}H_{34}O_8 = 462.5$.

CAS — 2203-97-6 (anhydrous hydrocortisone hydrogen succinate); 83784-20-7 (hydrocortisone hydrogen succinate monohydrate).

ATC — A01AC03; A07EA02; C05AA01; D07AA02; H02AB09; S01BA02; S02BA01.

ATC Vet — QA01AC03; QA07EA02; QC05AA01; QD07AA02; QH02AB09; QS01BA02; QS02BA01.

Pharmacopoeias. In *Eur.* (see p.vii) and *Jpn.* *US* allows the anhydrous form or the monohydrate.

Ph. Eur. 6.2 (Hydrocortisone Hydrogen Succinate). A white or almost white, hygroscopic powder. Practically insoluble in water; freely soluble in dehydrated alcohol and in acetone; dissolves in dilute solutions of alkali carbonates and alkali hydroxides. Store in airtight containers. Protect from light.

USP 31 (Hydrocortisone Hemisuccinate). It contains one molecule of water of hydration or is anhydrous. Store in airtight containers.

Hydrocortisone Sodium Phosphate

(BANM, rINNM) ⊗

Cortisol Sodium Phosphate; Fosfato sódico de hidrocortisona; Hydrocortisone, Phosphate Sodique d'; Natrii Hydrocortisoni Phosphas. Hydrocortisone 21-(disodium orthophosphate).

Натрия Гидрокортизона Фосфат

$C_{21}H_{29}Na_2O_8P = 486.4$.

CAS — 6000-74-4.

ATC — A01AC03; A07EA02; C05AA01; D07AA02; H02AB09; S01BA02; S02BA01.

ATC Vet — QA01AC03; QA07EA02; QC05AA01; QD07AA02; QH02AB09; QS01BA02; QS02BA01.

Pharmacopoeias. In *Br.*, *Jpn.*, and *US*.

BP 2008 (Hydrocortisone Sodium Phosphate). A white or almost white, hygroscopic powder. Freely soluble in water; practically insoluble in dehydrated alcohol and in chloroform. A 0.5% solution in water has a pH of 7.5 to 9.0. Protect from light.

USP 31 (Hydrocortisone Sodium Phosphate). A white to light yellow, odourless or practically odourless, exceedingly hygroscopic, powder. Soluble 1 in 1.5 of water; slightly soluble in alcohol; practically insoluble in chloroform, in dioxan, and in ether. Store in airtight containers.

The symbol ⊗ denotes a substance whose use may be restricted in certain sports (see p.vii)