



Medicinal products in ATC group C03, Diuretics

Reading instructions for the table below

Approved indication: The specified indication(s) of an active substance and pharmaceutical form, if stated, relate(s) to the medicinal product that has been licensed for the longest period of time.

Reimbursement status: The current reimbursement status of the medicinal product.

Treatment price per day: The listed prices per day are based on the medicinal products' reimbursement prices calculated in accordance with the Danish Medicines Agency's guidelines for evaluation and comparison of medicinal products in reassessments of reimbursement status dated 4 July 2006, cf. Appendix C2 and D.

Consumption: The number of persons in treatment is based on the Danish Medicines Agency's Register of Medicinal Product Statistics, cf. www.medstat.dk.

Single substance products for oral use

C03AA01	Bendroflumethiazide
Pharmaceutical forms	Tablets
Traded names	Centyl
Approved indication	"Treatment of oedemas, arterial hypertension, diabetes insipidus. Prevention of recurrent calcium-containing kidney stones."
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	1.25 – 2.5 mg tablets: DKK 0.23-0.46
Consumption	11,088 persons in treatment in 2006 11,140 persons in treatment in the first 10 months of 2007
Discussion	The price of treatment per day is at the same level as the price of furosemide, but the consumption is very low compared to that of furosemide. Bendroflumethiazide has a wider indication than furosemide and is presumably mainly used for other indications than hypertension. It is an old medicinal product which has its place in the therapy.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03AA01

C03BA11	Indapamide
Pharmaceutical forms	Tablets, prolonged-release tablets
Traded names	Indacar, Indapamide "Merck NM", Natrilix Retard, Tertensif Retard
Approved indication	"Arterial hypertension"
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	1.5 mg prolonged-release tablets: DKK 2.03 2.5 mg film-coated tablets: DKK 1.63
Consumption	6,504 persons in treatment in 2006 5,944 persons in treatment in the first 10 months of 2007
Discussion	Approx. 80% of the patients treated with indapamide are treated with the pro-

	longed-release tablets which are a little more expensive than the ordinary tablets when both types – as recommended – are given once per day. There is a very small beneficial effect in terms of adverse reactions on hyperkaliaemia due to the lower dose in the prolonged-release tablets, but the clinical significance is uncertain. The Committee finds that the potential beneficial effects in terms of adverse reactions of the prolonged-release tablets make the therapeutic value of the prolonged-release tablets proportionate with the price in relation to the tablets.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03BA11

C03CA01	Furosemide
Pharmaceutical forms	Tablets, prolonged-release capsules, oral drops
Traded names	Diural, Furese, Furix, Furix Retard, Furosemid "1A Farma", Furosemid "Copyfarm", Furosemid "DAK", Furosemid "HEXAL", Lasix, Lasix Retard
Approved indication	"Oedemas. Arterial hypertension."
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	40 mg tablets: DKK 0.27 40 mg prolonged-release capsules: DKK 0.76. 40 mg oral drops: DKK 2.84
Consumption	176,802 persons in treatment in 2006. Of these, a little more than 153,000 were being treated with the tablet form, a little less than 27,000 with the prolonged-release form, 700 with the drops and a little less than 1,000 were being treated with the injection fluid. A person may be treated with more than one form during a year. 168,528 persons were being treated in the first ten months of 2007 with more or less the same percentage distribution on the pharmaceutical forms.
Discussion	Due to its diuretic effect, the tablet formulation should be the obvious first-line treatment in the treatment with furosemide instead of the prolonged-release formulation. The tablet form has been used five to six times more frequently than the prolonged-release form. The prolonged-release tablets and the drops are more expensive than the tablets, but are presumably used in cases where the tablets are less appropriate. It is the opinion of the Committee that the advantages of the prolonged-release tablet in terms of compliance can justify the higher price.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03CA01

* The figures also include patients treated with the medicinal product for injection.

C03CA02	Bumetanide
Pharmaceutical forms	Tablets
Traded names	Burinex
Approved indication	"1 mg: Treatment of oedemas. Treatment of arterial hypertension. 2 mg: For the treatment of oedemas caused by heart insufficiency, liver cirrhosis and kidney disease, including nephrotic syndrome. 5 mg: Treatment of acute and

	chronic renal insufficiency.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	1 mg tablets: DKK 2.53
Consumption	3,977 persons in treatment in 2006. 3,682 persons in treatment in the first 10 months of 2007
Discussion	The treatment price per day with bumetanide is considerably higher than with furosemide, but the consumption is very small and is still decreasing. In the opinion of the Committee, the consumption is rational. It is an old medicinal product which has its place in the therapy.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03CA02

* The figures also include patients treated with the medicinal product for injection.

C03DA01	Spirolactone
Pharmaceutical forms	Tablets
Traded names	Hexalacton, Spirex, Spiron
Approved indication	“Ascites and oedemas accompanied by hyperaldosteronism. Primary hyperaldosteronism. Chronic heart insufficiency as a supplement to usual treatment of heart insufficiency.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	25-100 mg tablets: DKK 0.54 - 2.16
Consumption	45,710 persons in treatment in 2006. 43,696 persons in treatment in the first 10 months of 2007
Discussion	There is a relatively large consumption of spironolactone which is primarily used for the prevention of heart insufficiency. It is an old medicinal product which has its place in the therapy.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03DA01

C03DA04	Eplerenon
Pharmaceutical forms	Tablets
Traded names	Inspra
Approved indication	“Eplerenone is indicated as a supplement for the standard treatment including beta blockers to reduce the risk for cardiovascular mortality and morbidity in stable patients with left ventricular dysfunction (LVEF ≤ 40%) and clinical signs of heart failure following a recent myocardial infarction.”
Dispensing terms	B
Reimbursement status	No general reimbursement
Price per day	50 mg tablets: DKK 21.35
Consumption	481 persons in treatment in 2006 536 persons in treatment in the first 10 months of 2007
Discussion	Diagnosing and initiation of treatment require a special test (using echocardiography) and diagnosing. The price is very high compared to the other diuretics. It is the opinion of the Committee that the medicinal product, which was marketed in 2005, has not found its place in the therapy and that there is thus

	still a risk that it will be used outside the approved indication, e.g. for patients with mild heart insufficiency who have not recently suffered AMI or generally for patients with more severe heart insufficiency. In the opinion of the Committee, it is not possible to identify parts of the indication (“certain diseases”) that independently meet the criteria of the Executive Order on reimbursement for the granting of general reimbursement.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03DA04

* Calculated on the basis of the lowest actual prices as no reimbursement price exists.

Combinations for oral use

C03AB01	Bendroflumethiazide and potassium
Pharmaceutical forms	Tablets
Traded names	Centyl med kaliumklorid, Centyl Mite med kaliumklorid
Approved indication	“Treatment of oedemas, arterial hypertension, diabetes insipidus. Prevention of recurrent calcium-containing kidney stones.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	1.25-2.5 mg bendroflumethiazid and 573 mg potassium tablets: DKK 0.83 – 1.40
Consumption	317,668 persons in treatment in 2006 305,808 persons in treatment in the first 10 months of 2007
Discussion	There is a large consumption of the combination which is used for both hypertension and for heart insufficiency. The combination product is not more expensive than treatment with the individual substances taken separately, and there is a benefit in terms of compliance. The individual substances have been granted general reimbursement.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03AB01

C03CB02	Bumetanide and potassium
Pharmaceutical forms	Tablets
Traded names	Burinex med kaliumklorid
Approved indication	“Treatment of oedemas. Treatment of arterial hypertension.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	1 mg bumetanid and 573 mg potassium: DKK 1.94
Consumption	3,232 persons in treatment in 2006. 2,974 persons in treatment in the first 10 months of 2007
Discussion	The treatment price per day is low compared to the treatment price of the individual substances which are granted general reimbursement. An advantage in terms of improved compliance exists.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03CB02

C03EA01	Hydrochlorthiazide and amiloride
Pharmaceutical forms	Tablets
Traded names	Amilco, Sparkal, Sparkal Mite
Approved indication	“Oedemas and arterial hypertension in cases where hypokaliaemia is difficult to prevent by potassium supplement.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	25 mg hydrochlorthiazid and 2,5 mg amilorid: DKK 0.95
Consumption	28,980 persons in treatment in 2006 26,926 persons in treatment in the first 10 months of 2007
Discussion	The treatment price is low compared to other combination products with similar indications. The combination is expected to improve compliance compared to potassium supplement alone.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03EA01

C03EB01	Furosemide and amiloride
Pharmaceutical forms	Tablets
Traded names	Frusamil
Approved indication	“Oedemas where hypokaliaemia is difficult to prevent by potassium supplement.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	40 mg furosemid and 5 mg amilorid tableter: DKK 3.33
Consumption	2,139 persons in treatment in 2006. 1,968 persons in treatment in the first 10 months of 2007
Discussion	The medicinal product is more expensive than the other combinations with amiloride, but the consumption is very modest and is, in the opinion of the Committee, thus rational. The Committee also emphasises that the combination of furosemide with a potassium-sparing substance may be relevant if the patient needs a strong diuretic effect.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C03EB01

Parenteral medicinal products

C03CA01	Furosemide
Pharmaceutical forms	Injection
Traded names	Furix, Diural
Approved indication	“Oedemas. Hypertensive crisis. Induction of forced diuresis. Acute and chronic renal insufficiency.”
Dispensing terms	B

Reimbursement status	General reimbursement
Price per day	40 mg: DKK 2.44
Consumption	Ca. 1,000 persons in treatment in 2006.
Discussion	The medicinal product is used for acute treatment only, but is sometimes prescribed for patients in nursing homes who cannot ingest the substance orally.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for parenteral medicinal products in ATC group C03CA01

C03CA02	Bumetanide
Pharmaceutical forms	Injection
Traded names	Burinex
Approved indication	“Treatment of oedemas. Treatment of hypertensive crisis. Induction of forced diuresis. Treatment of acute and chronic renal insufficiency.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	1 mg: DKK 12.76
Consumption	27 packs sold in 2006
Discussion	The medicinal product is used for acute treatment only, but is sometimes prescribed for patients in nursing homes who cannot ingest the substance orally.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for parenteral medicinal products in ATC group C03AC02

Price survey of C03 - Diuretics

Based on the indication hypertension

Appendix C2

29 January 2008

Average lowest unit price for 6 price periods (period start from 22 october to 31 december 2007)

1. ATC	2. Medicinal product	3. Reimbursement status/dispensing terms		4. DDD (mg)	5. Daily Dose (mg) ¹	6. Pharmaceutical form	7. Strength (mg)	8. Average lowest unit price (DKK)	9. Price per day (DKK)
C03AA	Thiazides, plain								
C03AA01	Bendroflumethiazide	•	B	2.5	1.25 - 2.5 ²⁵	Tablets	5	0.91	0.23 - 0.46 ⁴
C03AB	Thiazides and potassium in combination								
C03AB01	Bendroflumethiazide and p. ⁷	•	B	2.5	1.25 - 2.5 ²⁵	Coated tablets	1.25 / 2.5	0.83 / 1.40	0.83 - 1.40
C03BA	Clopamide og indapamide								
C03BA11	Indapamide	•	B	2.5	1.5 - 2.5 ²⁶	Prol.-release tab.	1.5	2.03	2.03 - 3.38 ⁴
	Indapamide	•	B	2.5	1.5 - 2.5 ²⁶	Film-coated tablets	2.5	1.63	0.98 - 1.63 ⁴
C03CA	Loop-diuretics								
C03CA01	Furosemide	•	B	40	40 ³	Tablets	40	0.27	0.27
	Furosemide	•	B	40	40 ³	Prol.-release tab.	60	1.14	0.76 ⁴
	Furosemide	•	B	40	40 ³	Oral drops	10 mg/ml	0.71 kr./ml	2.84
	Furosemide	•	B	40	40 ³	Injection	10 mg/ml	0.61 kr./ml	2.44
C03CA02	Bumetanide	•	B	1	1 ³	Tablets	1	2.53	2.53
	Bumetanide	•	B	1	1 ³	Injection	0.5 mg/ml	6.38 kr./ml	12.76
C03CB	Loop-diuretics and potassium in combination								
C03CB02	Bumetanide and potassium ⁷	•	B	1	1 ³	Coated tablets	0.5	0.97	1.94
C03DA	Aldosterone antagonists								
C03DA01	Spirolactone	•	B	75	25 - 100 ²⁶	Tablets	25	0.54	0.54 2.16
C03DA04	Eplerenone	-	B	50	50 ³	Film-coated tab.	50	21.35	21.35

1. ATC	2. Medicinal product	3. Reimbursement status/dispensing terms		4. DDD (mg)	5. Daily Dose (mg) ¹	6. Pharmaceutical form	7. Strength (mg)	8. Average lowest unit price (DKK)	9. Price per day (DKK)
C03EA	Low-ceiling diuretics and potassium-sparing agents								
C03EA01	Hydrochlorothiazide and potassium-sparing agents. ⁸	•	B		25 ⁶	Tablets	25 / 50	0.95 / 0.99	0.95
C03EB	High-ceiling diuretica og kaliumbesparende midler								
C03EB01	Furosemide and pot.-spar. ⁹	•	B		40 ⁶	Film-coated tab.	40	3.33	3.33

Notes and explanations:

1	Can be given once a day unless otherwise noted
2	Equieffective dose by the Institute for Rational Pharmacotherapy
3	DDD (Defined Daily Dose) by the WHO
4	The medicinal product is not marketed in a strength equivalent to the daily dose
5	Recommended by the Institute for Rational Pharmacotherapy
6	Recommended with certain limitations or in special cases by the Institute for Rational Pharmacotherapy
7	+ 573 mg potassium
8	+ 2,5 mg amiloride in the tablet containing 25 mg hydrochlorothiazide and 5 mg amiloride in the tablet containing 50 mg hydrochlorothiazide
9	+ 5 mg amiloridhydrochloride

Symbols and abbreviations

Reimbursement status	
-	Not eligible for general reimbursement
●	General reimbursement for prescription-only medicinal products
■	Limited general reimbursement for over-the-counter medicinal products.
⊗	Limited general reimbursement for prescription-only medicinal products

Dispensing terms	
A	Only to be dispensed once on the same prescription, unless dispensed in smaller doses at a time.
AP4	Subject to the provisions of section 4 of the Executive Order on prescriptions.
AP4BG	Only to be dispensed to hospitals. Subject to the provisions of section 4 of the Executive Order on prescriptions.
AP4NB	Only to be dispensed to hospitals or following prescription by specific medical specialists. Subject to the provisions of section 4 of the Executive Order on prescriptions.
B	Only to be dispensed once on the same prescription, unless stated otherwise.
BEGR	Only to be dispensed to hospitals. Same terms apply as for dispensing group A.
HA	Over-the-counter drugs. Pharmacy-restricted medicinal product.
HF	Over-the-counter drugs. Non-pharmacy-restricted human medicinal product.
HX	Over-the-counter drugs. Non-pharmacy-restricted human medicinal product. Maximum 1 package/customer/day.
NBS	Only to be dispensed to hospitals or following prescription by specific medical specialists. Same terms apply as for dispensing group A.