1. NAME OF THE MEDICINAL PRODUCT

FLUIMUCIL 600 mg effervescent tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Fluimucil 600 mg effervescent tablets

Each tablet contains:

Active ingredient

Acetylcysteine 600 mg

Excipients: sodium, aspartame

For a full list of excipients, see section 6.1

3. PHARMACEUTICAL FORM

Effervescent tablets.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Treatment of respiratory tract diseases characterized by a thick and viscous hypersecretion: acute bronchitis, chronic bronchitis and its exacerbations, pulmonary emphysema, mucoviscidosis and bronchiectasis.

Antidotal treatment

Accidental or voluntary acetaminophen poisoning.

4.2 Posology and method of administration

Treatment of respiratory tract diseases

1 tablet daily (preferably in the evening), depend of physician prescription.

Accidental or voluntary acetaminophen poisoning

Initial oral dose of 140 mg/kg body weight to be administered as soon as possible, within 10 hours of toxic agent ingestion, followed by single doses of 70 mg/kg body weight every 4 hours and for 1-3 days.

Instructions for use

Dissolve one tablet or the contents of one sachet into a glass of water, by mixing with a spoon, as needed.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

The product is generally contraindicated during pregnancy and lactation

Children and adolescent

4.4 Special warnings and precautions for use

Mucolytic agents can induce respiratory obstruction in children under 2 years of age. Due to the physiological characteristics of the airways in this age group, the ability to expectorate may be limited. Therefore, mucolytic agents should not be used in children under 2 years of age (see paragraph 4.3 Contraindications). The safety and efficacy is not established in children aged 2 years and older and adolescent.

Caution is recommended when using the product in patients with peptic ulcer or history of it, especially in case of concomitant administration of other medicines with a known irritating effect on the gastric mucosa

Patients suffering from bronchial asthma must be closely monitored during therapy. Should bronchospasm occur, acetylcysteine must be stopped immediately, and appropriate treatment must be initiated.

The administration of acetylcysteine, mainly at treatment start, might fluidify bronchial secretion and increase their volume. If the patient is not able to effectively expectorate, postural drainage and bronchoaspiration should be performed.

Acetylcysteine may moderately affect histamine metabolism, therefore caution should be used when administering the product for long-term therapy in patients with histamine intolerance, since symptoms of intolerance can occur (headache, vasomotor rhinitis, itching).

A mild smell of sulphur does not indicate an alteration of the product but pertains to the specific nature of the active ingredient.

Important information about some of the ingredients

Fluimucil 600 mg effervescent tablet contain a source of phenylalanine, that can be harmful for patients suffering from phenylketonuria.

4.5 Interaction with other medicinal products and other forms of interaction

Drug-drug interactions

Antitussive drugs and mucolytic agents, like acetylcysteine, should not be concurrently administered, because the reduction in cough reflex could lead to accumulation of bronchial secretions.

Activated charcoal may reduce the effect of acetylcysteine.

Dissolution of acetylcysteine formulations concomitantly with other drugs is not recommended.

Reports of an inactivation of antibiotics resulting from acetylcysteine so far only relate to in-vitro tests in which the relevant substances were mixed directly. Nevertheless, when other oral drugs or antibiotics are required, it is advisable to administer them 2 hours apart from acetylcysteine. This does not relate to loracarbef.

Concurrent administration of nitroglycerin and acetylcysteine has been shown to cause significant hypotension and enhance temporal artery dilation. If concurrent nitroglycerin and acetylcysteine therapy is necessary, patients should be monitored for hypotension, which can be severe, and warned of the possibility of headaches.

Concurrent use of acetylcysteine and carbamazepine may result in subtherapeutic carbamazepine levels.

Paediatric population

Interaction studies have only been performed in adults.

Drug-Lab modifications

Acetylcysteine may cause interference with colorimetric assay method for salicylate measurement.

Acetylcysteine may interfere with urine ketone test.

4.6 Fertility, pregnancy, and lactation

Pregnancy

There are limited clinical data from the use of acetylcysteine in pregnant women.

Animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity (see section 5.3).

As a precautionary measure, it is preferable to avoid the use of FLUIMUCIL 600 mg effervescent tablets during pregnancy.

Prior to use in pregnancy, the potential risks should be balanced against the potential benefits.

Lactation

It is unknown whether acetylcysteine/metabolites are excreted in human milk.

A risk to the suckling child cannot be excluded.

A decision must be made whether to discontinue breast-feeding or to discontinue/abstain from FLUIMUCIL 600 mg effervescent tablets therapy taking into account the benefit of breast feeding for the child and the benefit of therapy for the woman.

Fertility

No data are available on the effect of acetylcysteine on human fertility. Animal studies do not indicate harmful effects with respect to fertility for humans at the recommended doses (see section 5.3).

4.7 Effects on ability to drive and use machines

Acetylcysteine has no known influence on the ability to drive and use machines.

4.8 Undesirable effects

Summary of the safety profile

The most frequent adverse events associated with the oral administration of acetylcysteine are gastrointestinal in nature. Hypersensitivity reactions including anaphylactic shock, anaphylactic/anaphylactoid reaction, bronchospasm, angioedema, rash, and pruritus have been reported less frequently.

Tabulated list of adverse reactions

In the table below adverse reactions are listed by system organ class and frequency (very common (≥1/10), common (≥1/100 to <1/10), uncommon (≥1/1,000 to <1/100), rare (≥1/10,000 to <1/1,000), very rare (<1/10,000) and not known (cannot be estimated from the available data).

Within each frequency grouping, undesirable effects are presented in order of decreasing seriousness.

System Organ Class	**Adverse reactions**			
	Uncommon (≥1/1,000 to <1/100)	**Rare** (≥1/10,000 to <1/1,000)	**Very rare** (<1/10,000)	**Unknown**
Immune system disorders	Hypersensitivity		Anaphylactic shock, anaphylactic/anaphylactoid reaction	
Nervous system disorders	Headache			
Ear and labyrinth disorders	Tinnitus			
Cardiac disorders	Tachycardia			
Vascular disorders			Haemorrhage	
Respiratory, thoracic, and mediastinal disorders		Bronchospasm, dyspnoea		
Gastrointestinal disorders	Vomiting, diarrhoea, stomatitis, abdominal pain, nausea	Dyspepsia		
Skin and subcutaneous tissue disorders	Urticaria, rash, angioedema, pruritus			
General disorders and administration site conditions	Pyrexia			Face oedema
Investigations	Blood pressure decreased			

Description of selected adverse reactions

In very rare cases, the occurrence of severe skin reactions such as Stevens-Johnson syndrome and Lyell's syndrome has been reported in temporal connection with the administration of acetylcysteine. In most cases at least one co-suspect drug more probably involved in triggering the reported mucocutaneous syndrome could be identified. Because of this, medical advice should be sought straight away if any new changes to the skin or mucous membranes occur, and acetylcysteine should be stopped immediately.

A decrease in platelet aggregation in the presence of acetylcysteine has been confirmed by various investigations. The clinical significance has not yet been established.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system.

4.9 Overdose

Healthy volunteers received 11.2 g acetylcysteine daily for three months without any serious undesirable effects. Oral doses of up to 500 mg acetylcysteine / kg body weight were tolerated without any symptoms of poisoning.

Symptoms

Overdoses may lead to gastrointestinal symptoms, such as nausea, vomiting and diarrhea.

Treatment

There is no specific antidote for acetylcysteine and treatment is symptomatic.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: mucolytics

ATC code R05CB01 , Antidotes – ATC Code : V03AB23

Mechanism of action and pharmacodynamics effects

Acetylcysteine [N-acetyl-L-cysteine (NAC)] exerts marked mucolytic-fluidifying action on mucous and mucopurulent secretions by depolymerising mucoproteic complexes and nucleic acids which increase the viscosity to the vitreous and purulent component of sputum and other secreta. Additional properties are reduction of induced hyperplasia of mucous cells, increase in surfactant production by stimulation of type II pneumocytes, stimulation of mucociliary activity, leading to improved mucociliary clearance.

Acetylcysteine also exerts a direct antioxidant action, being endowed with a nucleophilic free thiol group (-SH) able to interact directly with the electrophilic groups of oxidizing radicals. Particularly interesting is the finding that acetylcysteine protects α1-antitripsin, an elastase-inhibiting enzyme, from the inactivation by hypochlorous acid (HOCl), a potent oxidizing agent produced by the myeloperoxidase enzyme of activated phagocytes.

Moreover, its molecular structure enables acetylcysteine to easily cross cell membranes. Inside the cell, acetylcysteine is deacetylated, thus yielding L-cysteine, an amino acid indispensable for glutathione (GSH) synthesis. Acetylcysteine exerts in addition an indirect antioxidant effect through its role as GSH precursor. GSH is a highly reactive tripeptide, ubiquitously spread in the various tissues of animal organisms, which is essential for the maintenance of the cell functional capacity as well as morphological integrity. In fact, it is the most important intracellular defence mechanism against oxidizing radicals, both exogenous and endogenous, and several cytotoxic substances, including paracetamol.

Acetylcysteine plays its primary importance role by maintaining of adequate GSH levels, thus contributing to the cellular protection. Therefore, acetylcysteine represents a specific antidote for paracetamol poisoning.

5.2 Pharmacokinetic properties

Absorption

In humans, acetylcysteine is completely absorbed after oral administration. Because of the gut wall metabolism and first-pass effect, the bioavailability of acetylcysteine taken orally is very low (approx. 10%). No differences were reported for the various pharmaceutical forms. In patients with various respiratory or cardiac diseases, the maximum plasma concentration (C_{max}) is obtained between 2 to 3 hours after administration and the levels remained high over a period of 24 hours.

Distribution

Acetylcysteine is distributed both in the non-metabolized (20%) and the metabolized (active) (80%) form, and can mainly be found in the liver, kidneys, lungs, and bronchial secretions.

The volume of distribution of acetylcysteine ranges from 0.33 to 0.47 L/kg. Protein binding is about 50%, four hours after the dose and decreases to 20% at 12 h.

Acetylcysteine crosses the placenta (see section 4.6).

Biotransformation

Acetylcysteine undergoes rapid and extensive metabolism in the gut wall and liver following oral administration.

The resulting compound, cysteine, is considered to be an active metabolite. Following this stage of transformation, acetylcysteine and cysteine share the same metabolic route.

Elimination

Renal clearance may account for about 30% of total body clearance. Following oral administration, the terminal half-life of total acetylcysteine is 6.25 (4.59 to 10.6) hours.

5.3 Preclinical safety data

Non-clinical data reveal no special hazard for humans based on conventional studies of safety pharmacology, repeated dose toxicity, genotoxicity and toxicity to reproduction and development. High dose treatment in pregnant rats and rabbits revealed no evidence of impaired female fertility or harm to the foetus due to acetylcysteine.

Treatment of male rats for 15 weeks with acetylcysteine at an oral dose considered sufficiently in excess compared to the recommended human dose did not affect the fertility or general reproductive performance of the animals.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Effervescent tablets: Sodium bicarbonate; Anhydrous citric acid; Lemon flavour; Aspartame

6.2 Incompatibilities

Acetylcysteine containing products must not be mixed with other medicinal products.

6.3 Shelf life

3 years.

6.4 Special precautions for storage

Store below 30°C.

6.5 Nature and contents of container

Effervescent tablets: aluminium-polyethylene blisters. Box containing 5 blister @ 2 tablets

6.6 Special precautions for disposal <and other handling>

No special requirements.

7. MARKETING AUTHORISATION HOLDER

Manufactured by :
Zambon Switzerland Ltd
Cadempino – Switzerland

Imported by:
PT. Tunggal Idaman Abdi
Jakarta – Indonesia

Marketed by:
PT. Zambon Indonesia
Jakarta – Indonesia

HARUS DENGAN RESEP DOKTER
MEDICAL PRESCRIPTION ONLY

8. MARKETING AUTHORISATION NUMBER(S)

DKI1214500411A1

9. **DATE OF FIRST AUTHORIZATION/RENEWAL OF THE AUTHORIZATION**

December 21, 2012

10. DATE OF REVISION OF THE TEXT

March, 2022

Fluimucil®
Acetylcysteine
600mg
Effervescent

Bacalah leaflet ini dengan seksama sebelum Anda mulai menggunakan obat ini, karena berisi informasi penting untuk anda

- Simpan leaflet ini. Anda mungkin perlu membacanya lagi.
- Jika Anda memiliki pertanyaan lebih lanjut, tanyakan kepada dokter, perawat atau apoteker Anda.
- Jika Anda mengalami efek samping, sampaikan pada dokter, perawat atau apoteker Anda.
- Ini termasuk kemungkinan efek samping yang tidak tercantum dalam leaflet ini.

Informasi apa yang ada di Leaflet ini ?

1. Apa itu Fluimucil®600 mg effervescent dan apa gunanya?

Fluimucil®600 mg effervescent mengandung zat aktif Acetylcysteine 600 mg, yang mampu mengencerkan dan melarutkan dahak kental yang tertahan di saluran pernapasan, sehingga memudahkan pengeluaran dahak.

Fluimucil®600 mg effervescent diindikasikan untuk pengobatan penyakit saluran pernapasan yang ditandai dengan hipersekresi yang tebal dan kental, seperti: bronkitis akut, bronkitis kronis dan akut berulang, *pulmonary emphysema*, mukovisidosis (cystic fibrosis), bronkiektasis (pelebaran kronis pada saluran nafas).

Fluimucil®600 mg effervescent juga digunakan untuk terapi antidotum: Keracunan parasetamol yang disengaja maupun tidak.

2. Apa yang perlu Anda ketahui sebelum menggunakan Fluimucil®600 mg effervescent?

Jangan minum obat ini jika anda:

- Hipersensitif terhadap zat aktif atau terhadap salah satu zat tambahan dan zat kimia lainnya yang terkandung dalam obat ini.
- Anak dan Remaja

Peringatan dan perhatian

Gunakan obat ini dengan hati hati terutama :

- Pasien dengan riwayat *ulkus peptikum*, khususnya bila pemberian bersamaan dengan obat lain yang mempunyai efek iritasi pada mukosa lambung.
- Pasien yang menderita asma bronkial. Bila terjadi kesulitan bernafas karena bronkospasme setelah menggunakan obat ini, segera hentikan pengunaannya.

Mukolitik sebaiknya tidak digunakan pada anak di bawah 2 tahun karena kemapuan untuk mengekspektorasi/mengeluarkan dahaknya masih terbatas. Keamanan dan kemanjuran belum ditetapkan pada anak berusia 2 tahun keatas dan remaja.

Obat ini dapat meningkatkan jumlah cairan bronkus terutama pada awal terapi. Bila ini terjadi dan kesulitan mengekspektorasi secara efektif hubungi dokter Anda.

Acetylcysteine - sebaiknya digunakan dengan hati-hati jika diberikan untuk terapi jangka panjang pada pasien dengan intoleransi histamin. Karena gejala intoleransi dapat terjadi (sakit kepala, bersin, hidung tersumbat, gatal).

Sedikit bau sulfur tidak mengindikasikan kerusakan obat, namun berkaitan dengan sifat alami zat aktif.

Fluimucil® 600 mg Effervescent dan penggunaannya dengan obat lain
Pemberian antitusif dan Acetylcysteine sebaiknya tidak lakukan bersamaan, sebab penurunan reflek batuk dapat menyebabkan akumulasi dahak.
Tidak dianjurkan untuk mencampur obat-obatan lain dengan larutan Fluimucil

Gunakan FLUIMUCIL® dengan hati-hati bila Anda sedang menggunakan obat sebagai berikut*:*

- Arang aktif, mungkin dapat mengurangi efek acetylcycteine.
- Antibiotik oral. Disarankan diberikan dengan selang waktu 2 jam setelah pemberian acetylcysteine
- Nitrogliserin, untuk pengobatan jantung. Penggunaan bersamaan dapat menimbulkan turunnya tekanan darah dan sakit kepala, sehingga pasien perlu dipantau

Kehamilan & menyusui:
Kehamilan

Data klinik terkait penggunaan Acetylcysteine pada wanita hamil masih terbatas. Sebaiknya hindari penggunaan Fluimucil tablet effervescent 600 mg selama kehamilan
Konsultasikan ke dokter atau apoteker Anda sebelum minum obat ini

Menyusui
Konsultasikan ke dokter atau apoteker Anda sebelum minum obat ini
Kesuburan /fertilitas
Jika Anda sedang merencanakan kehamilan, mintalah saran dokter atau apoteker Anda sebelum minum obat ini

Kemampuan untuk menggerakkan mesin:
Tidak ada bukti bahwa obat dapat mempengaruhi konsentrasi saat berkendara.

Overdosis:
Tidak ada kasus overdosis yang dilaporkan terkait pemberian Acetylcysteine oral.
Gejala :
Overdosis dapat menyebabkan gejala saluran pencernaan seperti mual, muntah, dan diare.
Pengobatan
Tidak ada perawatan penawar racun spesifik yang tersedia; terapi overdosis didasarkan pada pengobatan terhadap gejalanya.

3. Cara menggunakan Fluimucil®600 mg effervescent
Kecuali diresepkan berbeda, dosis umum untuk **Fluimucil®600 mg effervescent** adalah **:**
Untuk Pengobatan penyakit saluran pernapasan
1 tablet 600 mg satu kali sehari (lebih baik pada malam hari) tergantung dari peresepan dokter.
Untuk Keracunan parasetamol yang disengaja maupun tidak

Dosis awal secara oral 140 mg / kg berat badan harus diberikan sesegera mungkin, dalam waktu 10 jam setelah bahan beracun masuk ke tubuh, diikuti dengan dosis tunggal 70 mg / kg berat badan yang diberikan setiap 4 jam selama 1-3 hari.

Larutkan tablet ke dalam gelas yang berisi air secukupnya, lalu aduk. Bila perlu, gunakan sendok, sehingga diperoleh larutan yang sesuai untuk diminum

4. Kemungkinan efek samping Fluimucil®600 mg effervescent

Seperti semua obat-obatan, acetylcysteine dapat menyebabkan efek samping, namun demikian tidak semua orang mengalaminya.
Efek samping yang dapat terjadi:
Tidak umum (dapat mempengaruhi hingga 1 dari 100 orang), seperti reaksi alergi (hipersensitivitas); sakit kepala; telinga berdengung (tinnitus); peningkatan denyut jantung (takikardia); muntah; diare; peradangan mulut (stomatitis); sakit perut; mual; urtikaria, ruam; pembengkakan pada wajah, bibir, mulut, lidah atau tenggorokan yang dapat menyebabkan kesulitan menelan atau bernapas (angioedema); gatal; demam (pireksia) dan penurunan tekanan darah.
Jarang (dapat mempengaruhi hingga 1 dari 1.000 orang), seperti kram dan kejang otot pernapasan (bronkospasme); kesulitan bernapas (dyspnoea) dan gangguan pencernaan (dispepsia).
Sangat jarang (dapat mempengaruhi hingga 1 dari 10.000 orang) seperti reaksi alergi yang parah (syok anafilaksis, reaksi anafilaksis / anafilaktoid); perdarahan (hemorrhage).
Tidak diketahui (frekuensi tidak dapat diperkirakan dari data yang tersedia) : pembengkakan (edema) pada wajah.

Terdapat laporan yang sangat jarang terkait reaksi kulit yang serius (sindrom *Stevens-Johnson* atau sindrom *Lyell*). Jika Anda merasakan perubahan pada selaput lendir atau kulit Anda, berhentilah mengonsumsi obat ini dan hubungi dokter Anda. Serta hubungi dokter Anda jika terjadi perdarahan dengan waktu yang lama.

5. Cara menyimpan Fluimucil®600 mg effervescent

Simpan pada suhu dibawah 30°C.
Hindarkan dari jangkauan anak anak

6. Isi kemasan dan informasi lainnya.

Tiap tablet mengandung Acetylcysteine 600 mg

Kemasan:
Box, berisi 5 blister @ 2 tablet effervescent

Diproduksi oleh:
Zambon Switzerland Ltd
Cadempino – Switzerland
Diimpor oleh:
PT. Tunggal Idaman Abdi
Jakarta – Indonesia
Dipasarkan oleh:
PT. Zambon Indonesia
Jakarta – Indonesia

HARUS DENGAN RESEP DOKTER
No. Reg. DKI1214500411A1

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