



## Drug Information Center/KAUH How to Select Antibiotics in Celiac disease

**P**atients who have been diagnosed with celiac disease (CD) or have a need to follow a gluten-free (GF) diet must be aware of potential sources of gluten. In the area of pharmaceuticals, potential sources of gluten contamination come primarily from the addition of the excipient (filler) ingredients added to the active drug in order to make a particular dosage form.

Gluten ingestion in a patient with Celiac Disease causes an immunologically mediated inflammatory response, which results in damage to the mucosa of the small intestine. It requires only a relatively small amount of the gluten to illicit this response so it is important to avoid the exposure. Excipients form the bulk of the product and are designed to perform several functions. In addition to providing bulk, they may be utilized as lubricants for the powder, or as in the case of starches, absorb water, which causes the tablet to swell and disintegrate. It is these starches that provide the potential source of gluten contamination. These excipients can be obtained from any starch source, but are primarily derived from corn, potato and tapioca; however, they have also been known to contain starch from wheat. There are a few products that are clearly labeled as GF, however, the majority of the manufacturers do not provide that information on either the package or the package insert.

### **Excipients in Leaflets for drugs in Jordan:**

#### **Erythroder (Erythromycin ) 065539176 دار الدواء**

Suspension: Tribasic SODIUM citrate.2H<sub>2</sub>O, Sodium saccharin, methyl hydroxybenzoate, sodium carboxymethylcellulose, simethicon, sucrose, guar gum, strawberry powder.

Tablet: Tribasic sodium citrate.2H<sub>2</sub>O, magnesium stearate, **sodium Starch glycolate ( not specified what is the source (may be wheat) )**, sodium carboxymethylcellulose, colloidal anhydrous silica, microcrystalline cellulose, hypromellose, titanium dioxide, macrogol, ponceau 4R ( E 124), sunset yellow ( E 110), quinoline yellow ( E 104).

#### **omnicef ( Cefdinir) 065802900 شركة أدوية الحكمة**

Suspension: citric acid anhydrous, sodium benzoate, trisodium citrate anhydrous, guar gum, xanthan gum, strawberry powder flavor, magnesium stearate, colloidal silicon dioxide, sugar.

Tablet: Camellose, calcium, magnesium stearate, polyoxyl 40 stearate

#### **Azomyne (Azithromycin ) 064162607 شركة الحياة للصناعات الدوائية**

Dry suspension: Tribasic sodium phosphate, xanthan gum, ammonium glycyrrhizinate, hypromellose, sodium laurilsulphate, methyl parahydroxybenzoate, **Starch ( not specified what is the source, further information is needed)**, saccharin sodium, flavor and sucrose.

Capsule: lactose, croscarmellose, sodium, magnesium stearate and sodium laurilsulfate

## **Augmantin (Amoxicillin/Clavulinate)**

Tablet: The other ingredients are:

Tablet core - magnesium stearate, sodium, starch glycollate type A (potato), colloidal anhydrous silica, microcrystalline cellulose.

Film coat: titanium dioxide(E171), hypromellose, macrogol (4000, 6000) and silicone oil (dimeticone).

## **Balkatrin (Co-trimoxazol) 065802200** الشركة العربية لصناعة الادوية

Suspension :

Polysorbate 80, glycerin, avicel rc-501, ponceau (red 4r), yellow color food grade, saccharin sodium, sucrose, oil of anise, methyl hydroxybenzoate, propyl hydroxybenzoate, water purified.

Tablet: starch maize, benzoic acid, gelatin, sodium starch glycolate, colloidal silicon dioxide, sodium lauryl sulphate, magnesium stearate

Forte : gelatin, benzoic acid, sodium starch glycolate ( not specified what is the source, further information is needed), colloidal silicon dioxide, magnesium stearate

## **Amoclan : (Amoxicillin/Clavulinate) 065802900** شركة أدوية الحكمة

Amoclan BID (400 mg /5 ml) :

Xanthan gum, hydroxypropyl methyl cellulose, succinic acid, colloidal silicon dioxide, colloidal silicon dioxide, aspartame, orange flavor, golden syrup, syloid.

**Amoclan BID (200mg/5ml) :**

Xanthan gum, hydroxypropyl methyl cellulose, succinic acid, colloidal silicon dioxide, colloidal silicon dioxide, aspartame, orange flavor, golden syrup, syloid

**Amoclan forte (312mg/5ml) :**

Xanthan gum, hydroxypropyl methyl cellulose, succinic acid, colloidal silicon dioxide, colloidal silicon dioxide, aspartame, golden syrup, syloid, sodium saccharin, lemon powder flavor, orange powder flavor, strawberry powder flavor.

**Amoclan (156mg/5ml) :**

Xanthan gum, hydroxypropyl methyl cellulose, succinic acid, colloidal silicon dioxide, colloidal silicon dioxide, aspartame, golden syrup, syloid, sodium saccharin, lemon powder flavor, orange powder flavor, strawberry powder flavor.

## **Suprax (Cefixime) 065802900** شركة أدوية الحكمة

The other ingredients are microcrystalline cellulose, pregelatinised starch (processed mostly no gluten. Should make sure by calling manufacturer), calcium hydrogen, phosphate dihydrate, magnesium stearate, hypromellose, macrogol 6000 and titanium, dioxide (E171).

**Ceclor (Cefaclor) 064022470** شركة مستودع الأدوية العربي

Inactive ingredients:

\* mannitol, hypromellose, hydroxypropylcellulose, methacrylic acid copolymer, stearic acid, magnesium stearate, propylene glycol, talc – purified, colour mixture dark blue YS-1-4273.

This medicine does not contain lactose, sucrose, gluten, tartrazine or any other azo dyes.

**BACTRIM (sulfamethoxazole and trimethoprim) 065824654**

مسنات و رشيدات و شاوي ادوية مستودع

Inactive ingredients

BACTRIM DS tablets also contain:

- povidone (1201)
- docusate sodium (480)
- sodium starch glycollate
- magnesium stearate (470)

BACTRIM DS tablets are gluten free and lactose free.

BACTRIM oral suspension also contains:

- Cellulose - Dispersible (460)
- methyl hydroxybenzoate (218)
- propyl hydroxybenzoate (216)
- sorbitol solution (420)
- polysorbate 80 (433)
- banana flavour 85509 H
- vanilla flavour 73690-36
- water

BACTRIM oral suspension is gluten free and sugar free.

**Flagyl (Metronidazole) شركة ألفه للأدوية**

Inactive ingredients:

Flagyl 200 mg & 400 mg tablets also contain dibasic calcium phosphate, **maize starch (corn starch)**, dibasic calcium phosphate, **maize starch (corn starch)**, povidone, macrogol 400, hypromellose, magnesium stearate and talc (400 mg only).

Flagyl S suspension also contains: sodium phosphate – dibasic dihydrate, aluminium magnesium silicate, sucrose, methyl and propyl hydroxybenzoate, ethanol, lemon flavour, terpeneless orange oil, water -purified.

Flagyl suppositories also contain hard fat.

**Zithromax (azithromycin) 064642945** مستودع أدوية الصباغ

The other ingredients are lactose, magnesium stearate, **maize starch (corn starch)**, sodium lauryl sulphate, gelatin, iron oxide (black) E172, shellac, propylene glycol, sulphur dioxide and titanium dioxide.

**Zovirax (Acyclovir) 064636180** مستودع أدوية طنوس و أولاده

cellulose-microcrystalline, povidone, **sodium starch glycolate ( not specified what is the source, further information is needed)**, aluminium magnesium silicate, magnesium stearate, macrogol 8000 and coating opadry Y-1-7000 concentrate.

**VFEND 5 (voriconazole)**

Inactive Ingredients

The 50 mg and 200 mg tablets: contain the following other ingredients:

- lactose
- **maize starch (pregelatinised) ( corn starch)**
- croscarmellose sodium
- povidone
- magnesium stearate
- hypromellose
- titanium dioxide
- glycerol triacetate

VFEND Oral Suspension contains  
the following other ingredients:

- sucrose
- colloidal anhydrous silica
- titanium dioxide
- sodium citrate
- xanthan gum
- sodium benzoate
- anhydrous citric acid
- natural orange flavour

VFEND IV contains the  
following other ingredients:

- Water for Injections
- Sulfobutylether beta cyclodextrin sodium (SBECD).

**Rifadin (Rifampin)** شركة ألفة للأدوية

Syrup contain:

- Each 1ml of syrup contains 20mg of the active ingredient, rifampicin.
- The other ingredients agar, sucrose, methyl-p-hydroxybenzoate, propyl-phydroxybenzoate, potassium sorbate, sodium metabisulphite, tween 80,

raspberry essence, saccharin, diethanolamine, purified water

Each hard capsule contains 300mg rifampicin as the active substance. The capsules also contain **maize starch (corn starch)** and magnesium stearate. Capsule Shell: gelatin, erythrosine (E127), indigo carmine (E132) and titanium dioxide (E171). Printing Ink: shellac, antifoam DC1510 and titanium dioxide (E171).

**Noroxin (Norfloxacin) 06 4624621** مستودع أدوية أدانكو

Inactive Ingredients:

- microcrystalline cellulose
- croscarmellose sodium
- magnesium stearate
- Opadry AMB OY-B-28920.

**The tablets do not contain gluten, lactose, sucrose, tartrazine or any other azo dyes.**

**Keflex (cephalexin) 064022470** مستودع الأدوية العربي

They also contain:

- sodium lauryl sulphate
- methylcellulose
- dimethicone 350
- xanthan gum
- starch - pregelatinised maize
- allura red AC CI 16035
- sucrose
- tuttifrutti 51880 TP0551.

**Keflex suspensions do not contain lactose, gluten or tartrazine.**

**Diflucan (fluconazole) 064642945** أدوية الصباغ

The other ingredients are: sodium chloride, water for injections and sodium hydroxide (for pH adjustment).

**ospamox (Amoxicillin)065600100** مستودع أدوية النابلسي

The other ingredients are:

Core: magnesium stearate, polyvidone (K25), **sodium starch glycolate (type A)** ( potato), cellulose, microcrystalline,  
Coating: titanium dioxide, talc, hypromellose.

**MOXILEN (amoxicillin)065151026** مستودع أدوية الهلال

The other ingredients are:

MOXILEN capsules 250 mg contain magnesium stearate. The capsule shell contains gelatin, erythrosine (E127), red iron oxide (E172), black iron oxide (E172), and titanium dioxide (E171).

MOXILEN capsules 500 mg contain magnesium stearate. The capsule shell contains gelatin, erythrosine (E127), carmoisine (E122), brilliant blue (E133) and titanium dioxide (E171).

**Cefodox (Cefpodoxime proxetil) 065150580** الشركة الدولية للأدوية

Other ingredients include magnesium stearate, carmellose calcium, hydroxypropylcellulose, sodium laurilsulfate, lactose monohydrate, titanium dioxide, talc and hypromellose

**Zinnat ( cefuroxime axitile) 064636180** مستودع طنوس و اولاده

- The other ingredients are microcrystalline cellulose, croscarmellose sodium type A, sodium lauryl sulphate, hydrogenated vegetable oil, silica colloidal anhydrous, methylhydroxypropyl cellulose, propylene glycol, methyl parahydroxybenzoate, propyl parahydroxybenzoate and Opaspray white M-1-7120J [containing titanium dioxide (E171) and sodium benzoate (E211)].

**Klacid (clarithromycin)065162971** مستودع أدوية أبو شيخه

Oral Suspension contains

Each 5ml spoonful of Klacid Granules for Oral Suspension contains 250 mg of the active ingredient clarithromycin.

The other ingredients are; sucrose, carbomers (carbopol 974P), povidone K90, hypromellose phthalate, castor oil, silicon dioxide, xanthan gum, fruit punch flavour, potassium sorbate, citric acid, **maltodextrin (call the manufacturer to define the source of starch )** and titanium dioxide.

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