E-Z-PAQUE- barium sulfate suspension
E-Z-EM Canada Inc

HIGHLIGHTS OF PRESCRIBING INFORMATION
These highlights do not include all the information needed to use Liquid E-Z-PAQUE safely and effectively. See full prescribing information for Liquid E-Z-PAQUE.

Liquid E-Z-PAQUE (barium sulfate) oral suspension
Initial U.S. Approval: 2016

INDICATIONS AND USAGE

Liquid E-Z-PAQUE is a radiographic contrast agent indicated for use in single contrast radiographic examinations of the esophagus, stomach, and small bowel to visualize the gastrointestinal (GI) tract in adult and pediatric patients (1)

DOSAGE AND ADMINISTRATION

- Adults: Recommended oral dose is 150 mL to 750 mL (87g to 435g of barium sulfate, respectively) (2.1)
- Pediatric patients: adjust dose based on relative GI volume (2.1)

DOSAGE FORMS AND STRENGTHS

- Oral suspension 213 g barium sulfate (60% w/v) (3)

CONTRAINDICATIONS

- Known or suspected perforation of the GI tract (4)
- Known obstruction of the GI tract (4)
- Conditions associated with high risk of GI perforation or aspiration (4)
- Known severe hypersensitivity to barium sulfate or any of the excipients of Liquid E-Z-PAQUE (4)

WARNINGS AND PRECAUTIONS

- Hypersensitivity reactions: Emergency equipment and trained personnel should be immediately available (5.1)
- Intra-abdominal barium leakage: May occur in conditions such as GI fistula, ulcer, inflammatory bowel disease, appendicitis or diverticulitis, severe stenosis or obstructing lesions of the GI tract (5.2)
- Delayed GI transit and obstruction: Patients should maintain adequate hydration in days following a barium sulfate procedure to avoid obstruction or impaction (5.3)
- Aspiration pneumonitis: Patients with history of food aspiration or with swallowing disorders are at increased risk (5.4)

ADVERSE REACTIONS

Common adverse reactions include nausea, vomiting, diarrhea and abdominal cramping (6)
To report SUSPECTED ADVERSE REACTIONS, contact Bracco Diagnostics Inc at 1-800-257-5181 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch
See 17 for PATIENT COUNSELING INFORMATION.

Revised: 3/2017

FULL PRESCRIBING INFORMATION: CONTENTS*

* Sections or subsections omitted from the full prescribing information are not listed.

FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

Liquid E-Z-PAQUE is indicated for use in single contrast radiographic examinations of the esophagus, stomach, and small bowel to visualize the gastrointestinal (GI) tract in adult and pediatric patients.

2 DOSAGE AND ADMINISTRATION

2.1 Recommended Dosage

The optimal oral dose of Liquid E-Z-PAQUE will vary depending on the size and anatomy of the patient and the procedure being performed. The recommended oral dose of Liquid E-Z-PAQUE:

- Adults: 150 to 750 mL (87 g to 435 g of barium sulfate, respectively). Volumes closer to 150 mL are recommended for examination of the esophagus and stomach and volumes up to 750 mL are recommended for examination of the small bowel
- Pediatric Patients: Adjust dose based on GI volume
  - For examinations of the upper GI tract, administer a volume sufficient to fully distend the esophagus or stomach.
  - For small bowel examinations:
    - Age birth to less than 2 years: 30 mL to 75 mL
    - Age 2 years to less than 17 years: 75 mL to 480 mL

2.2 Administration Instructions

- For oral use only
- Shake bottle vigorously for 30 seconds prior to oral administration to fully suspend product
- Administer undiluted
- Ensure patients have nothing by mouth for the following time period prior to the examination:
  - Neonates and Infants < 3 months [illegible] 2 hours
  - Infants 3-12 months [illegible] 3 hours
  - > 12 months of age [illegible] 4 hours

- Discard any unused suspension
- Encourage patients to maintain hydration following the barium sulfate procedure

3 DOSAGE FORMS AND STRENGTHS

Liquid E-Z-PAQUE oral suspension: 213 grams of barium sulfate supplied as a suspension (60 % w/v) in a single-dose bottle.

4 CONTRAINDICATIONS

Liquid E-Z-PAQUE is contraindicated in patients with the following conditions:
- known or suspected perforation of the GI tract
- known obstruction of the GI tract
- high risk of GI perforation such as those with a recent GI perforation, acute GI hemorrhage or ischemia, toxic megacolon, severe ileus, post GI surgery or biopsy, acute GI injury or burn, or recent radiotherapy to the pelvis
- high risk of aspiration such as those with prior aspiration, tracheo-esophageal fistula, or obtundation
- known severe hypersensitivity to barium sulfate or any of the excipients of Liquid E-Z-PAQUE

5 WARNINGS AND PRECAUTIONS

5.1 Hypersensitivity Reactions

Barium sulfate preparations contain a number of excipients, including natural and artificial flavors and may induce serious hypersensitivity reactions. The manifestations include hypotension, bronchospasm and other respiratory impairments, dermal reactions including rashes, urticaria and itching. A history of bronchial asthma, atopy or a previous reaction to a contrast agent may increase the risk for hypersensitivity reactions. Emergency equipment and trained personnel should be immediately available for treatment of a hypersensitivity reaction.

5.2 Intra-abdominal Barium Leakage

The use of Liquid E-Z-PAQUE is contraindicated in patients at high risk of perforation of the GI tract *[see Contraindications (4)]*. Administration of Liquid E-Z-PAQUE may result in leakage of barium from the GI tract in the presence of conditions such as carcinomas, GI fistula, inflammatory bowel disease, gastric or duodenal ulcer, appendicitis, diverticulitis, and in patients with a severe stenosis at any level of the GI tract, especially distal to the stomach. Barium leakage has been associated with peritonitis and granuloma formation.

5.3 Delayed Gastrointestinal Transit and Obstruction

Orally administered barium sulfate may accumulate proximal to a constricting lesion of the colon, causing obstruction or impaction with development of baroliths (inspissated barium associated with feces) and may cause abdominal pain, appendicitis, bowel obstruction, or rarely perforation. Patients with the following conditions are at higher risk for developing obstruction or baroliths: severe stenosis at any level of the GI tract, impaired GI motility, electrolyte imbalance, dehydration, on a low residue diet, on medications that delay GI motility, constipation, cystic fibrosis or Hirschsprung disease, and the elderly *[see Use in Specific Populations (8.4, 8.5)]*. To reduce the risk of delayed GI transit and obstruction, patients should maintain adequate hydration following a barium sulfate procedure.

5.4 Aspiration Pneumonitis

The use of Liquid E-Z-PAQUE is contraindicated in patients at high risk of aspiration *[see Contraindications (4)]*. Oral administration of barium is associated with aspiration pneumonitis,

especially in patients with a history of food aspiration or with compromised swallowing mechanism. Vomiting following oral administration of barium sulfate may lead to aspiration pneumonitis. In patients at risk for aspiration, begin the procedure with a small ingested volume of Liquid E-Z-PAQUE. Discontinue administration of Liquid E-Z-PAQUE immediately if aspiration is suspected.

5.5 Systemic Embolization

Barium sulfate products may occasionally intravasate into the venous drainage of the large bowel and enter the circulation as a "barium embolus" leading to potentially fatal complications which include systemic and pulmonary embolism, disseminated intravascular coagulation, septicemia and prolonged severe hypotension. Although this complication is exceedingly uncommon after oral administration of barium sulfate suspension, monitor patients for potential intravasation when administering barium sulfate.

5.6 Risk with Hereditary Fructose Intolerance

Liquid E-Z-PAQUE contains sorbitol which may cause severe symptoms if ingested by patients with hereditary fructose intolerance. Severe symptoms may include the following: vomiting, hypoglycemia, jaundice, hemorrhage, hepatomegaly, hyperuricemia, and kidney failure. Before administration of Liquid E-Z-PAQUE assess patients for a history of hereditary fructose intolerance and avoid use in these patients.

6 ADVERSE REACTIONS

The following adverse reactions have been identified from spontaneous reporting or clinical studies of barium sulfate administered orally. Because the reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or to establish a causal relationship to drug exposure:

- Nausea, vomiting, diarrhea and abdominal cramping
- Serious adverse reactions and fatalities include aspiration pneumonitis, barium sulfate impaction, intestinal perforation with consequent peritonitis and granuloma formation, vasovagal and syncopal episodes

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary
Liquid E-Z-PAQUE is not absorbed systemically following oral administration, and maternal use is not expected to result in fetal exposure to the drug *[see Clinical Pharmacology (12.3)]*.

8.2 Lactation

Risk Summary
Liquid E-Z-PAQUE is not absorbed systemically by the mother following oral administration, and breastfeeding is not expected to result in exposure of the infant to Liquid E-Z-PAQUE *[see Clinical Pharmacology (12.3)*.

8.4 Pediatric Use

The efficacy of Liquid E-Z-PAQUE in pediatric patients from birth to less than 17 years of age is based on successful opacification of the esophagus, stomach, and small bowel during single contrast radiographic procedures *[see Clinical Pharmacology (12.1)]*. Safety and dosing recommendations in pediatric patients are based on clinical experience *[see Dosage and Administration (2.1)]*.

Liquid E-Z-PAQUE is contraindicated in pediatric patients with tracheo-esophageal fistula. *[see Contraindications (4)]*. Pediatric patients with a history of asthma or food allergies may be at increased

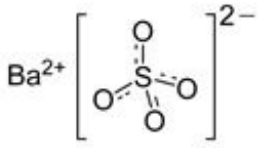
risk for development of hypersensitivity reactions [*see Warnings and Precautions (5.1)]*. Monitor pediatric patients with cystic fibrosis or Hirschsprung disease for bowel obstruction after use *[see Warnings and Precautions (5.3)]*

8.5 Geriatric Use

Clinical studies of Liquid E-Z-PAQUE do not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients. In general, dose selection for an elderly patient should be cautious, usually starting at the low end of the dosing range, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

11 DESCRIPTION

Liquid E-Z-PAQUE (barium sulfate) is a radiographic contrast agent supplied as a white to lightly colored barium sulfate suspension (60%w/v) for oral administration. The active ingredient barium sulfate is designated chemically as $BaSO_4$ with a molecular weight of 233.4 g/mol, a density of 4.5 g/cm^3, and the following chemical structure:



Liquid E-Z-PAQUE contains the following excipients: carboxymethyl cellulose sodium, citric acid, natural and artificial strawberry lemon cream flavor, polysorbate 80, potassium sorbate, purified water, saccharin sodium, simethicone emulsion, sodium benzoate, sodium citrate, sorbitol solution, xanthan gum.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Due to its high atomic number, barium (the active ingredient in Liquid E-Z-PAQUE) is opaque to x-rays and therefore acts as a positive contrast agent for radiographic studies.

12.3 Pharmacokinetics

Under physiological conditions, barium sulfate passes through the gastrointestinal tract in an unchanged form and is absorbed only in pharmacologically insignificant amounts.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

No animal studies have been performed to evaluate the carcinogenic potential of barium sulfate or potential effects on fertility.

16 HOW SUPPLIED/STORAGE AND HANDLING

How Supplied

Liquid E-Z-PAQUE (barium sulfate) is a suspension (60% w/v) supplied as a unit dose in a single use HDPE plastic bottle containing 213 grams of barium sulfate in 355 mL.

Provided as: 12 x 355 mL bottles (NDC 32909-187-02).

Storage and Handling
Store at USP controlled room temperature 20 to 25°C (68 to 77° F). Protect from freezing.

17 PATIENT COUNSELING INFORMATION

After administration advise patients to:

- Maintain adequate hydration
- Seek medical attention for worsening of constipation or slow gastrointestinal passage
- Seek medical attention for any delayed onset of hypersensitivity, such as: rash, urticaria, or respiratory difficulty

Manufactured for
Bracco Diagnostics Inc.
Monroe Township, NJ 08831
by EZEM Canada Inc
Anjou (Quebec) Canada H1J 2Z4

Revised February 2020

CL110101

LIQUID E-Z-PAQUE 355 mL Carton and Label
NDC: 32909-187-02

Single dose bottle – For oral use only

For use in single contrast radiographic studies of the esophagus, stomach and small bowel in adult and pediatric patients.

See prescribing information for complete dosage and administration information.

Store at USP controlled room temperature, 20 to 25°C (68 to 77°F). Protect from freezing.

SHAKE WELL PRIOR TO USE, THIS PRODUCT MUST BE FULLY SUSPENDED.

DO NOT USE IF INNER SEAL IS BROKEN OR MISSING

rev. 02/20

SINGLE CONTRAST GI STUDIES

Bracco Diagnostics

355 mL NDC 32909-187-02

Liquid E-Z-PAQUE®

(BARIUM SULFATE) ORAL SUSPENSION (60% w/v)

For Oral Use Only

Rx only

Manufactured by
E-Z-EM Canada Inc,
Anjou, Quebec H1J2Z4, Canada
for Bracco Diagnostics Inc.,
Monroe Twp., NJ08831

Each 100 mL contains 60 g barium sulfate and the following inactive ingredients: Carboxymethyl cellulose sodium, citric acid, natural and artificial strawberry lemon cream flavor, polysorbate 80, potassium sorbate, purified water, saccharin sodium, simethicone emulsion, sodium benzoate, sodium citrate, sorbitol solution, xanthan gum.

(01)10332909187023

Lot and expiry encoding area Unvarnished

Lot

Exp

CI110201

NDC 32909-187-02 12 x 355 mL

Bracco Diagnostics

Liquid E-Z-PAQUE®

(BARIUM SULFATE) ORAL SUSPENSION, (60% w/v)

Single dose bottle – For oral use only

For use in single contrast radiographic examinations of the esophagus, stomach and small bowel in adult and pediatric patients.

Usual dosage: See prescribing information

Each 100 mL contains 60 g barium sulfate and the following inactive ingredients: Carboxymethylcellulose sodium, citric acid, natural and artificial strawberry lemon cream flavor, polysorbate 80, potassium sorbate, purified water, saccharin sodium, simethicone emulsion, sodium benzoate, sodium citrate, sorbitol solution, xanthan gum.

Store at USP controlled room temperature, 20 to 25°C (68 to 77°F). Protect from freezing.

Rx only

Manufactured by E-Z-EM Canada Inc,
Anjou, Quebec H1J2Z4, Canada
for Bracco Diagnostics Inc.
Monroe Twp., NJ 08831

LOT

EXP

Lot and expiry encoding area

(01)30332909187027

rev. 02/20

CE110301

E-Z-PAQUE

barium sulfate suspension

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:32909-186
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
Barium Sulfate (UNII: 25BB7EKE2E) (Barium Sulfate - UNII:25BB7EKE2E)	Barium Sulfate	0.6 g in 1 mL

Inactive Ingredients	
Ingredient Name	**Strength**
CARBOXYMETHYLCELLULOSE SODIUM (UNII: K679OBS311)	
ANHYDROUS CITRIC ACID (UNII: XF417D3PSL)	
DIMETHICONE 350 (UNII: 2Y53S6ATLU)	
DIMETHICONE 1000 (UNII: MCU2324216)	
POLYSORBATE 80 (UNII: 6OZP39ZG8H)	
POTASSIUM SORBATE (UNII: 1VPU26JZZ4)	
WATER (UNII: 059QF0KO0R)	
SACCHARIN SODIUM (UNII: SB8ZUX40TY)	
SILICON DIOXIDE (UNII: ETJ7Z6XBU4)	
SODIUM BENZOATE (UNII: OJ245FE5EU)	
TRISODIUM CITRATE DIHYDRATE (UNII: B22547B95K)	
SORBITOL (UNII: 506T60A25R)	
XANTHAN GUM (UNII: TTV12P4NEE)	

Product Characteristics			
Color	WHITE	**Score**	
Shape		**Size**	
Flavor	STRAWBERRY	**Imprint Code**	
Contains			

Packaging				
#	**Item Code**	**Package Description**	**Marketing Start Date**	**Marketing End Date**
1	NDC:32909-186-02	1 in 1 CARTON	03/01/2017	10/31/2021
1		355 mL in 1 BOTTLE, PLASTIC; Type 0: Not a Combination Product		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
NDA	NDA208143	03/01/2017	10/31/2021

E-Z-PAQUE

barium sulfate suspension

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:32909-187
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
Barium Sulfate (UNII: 25BB7EKE2E) (Barium Sulfate - UNII:25BB7EKE2E)	Barium Sulfate	0.6 g in 1 mL

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DIMETHICONE 1000 (UNII: MCU2324216)	
POLYSORBATE 80 (UNII: 6OZP39ZG8H)	
POTASSIUM SORBATE (UNII: 1VPU26JZZ4)	
WATER (UNII: 059QF0KO0R)	
SACCHARIN SODIUM (UNII: SB8ZUX40TY)	
SILICON DIOXIDE (UNII: ETJ7Z6XBU4)	
SODIUM BENZOATE (UNII: OJ245FE5EU)	
TRISODIUM CITRATE DIHYDRATE (UNII: B22547B95K)	
SORBITOL (UNII: 506T60A25R)	
XANTHAN GUM (UNII: TTV12P4NEE)	

Product Characteristics			
Color	WHITE	**Score**	
Shape		**Size**	
Flavor	STRAWBERRY	**Imprint Code**	
Contains			

Packaging				
#	**Item Code**	**Package Description**	**Marketing Start Date**	**Marketing End Date**
1	NDC:32909-187-02	12 in 1 CARTON	11/01/2020	
1		355 mL in 1 BOTTLE, PLASTIC; Type 0: Not a Combination Product		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
NDA	NDA208143	11/01/2020	

Labeler - E-Z-EM Canada Inc (204211163)

Registrant - BRACCO DIAGNOSTICS INC (849234661)

Establishment

Name	Address	ID/FEI	Business Operations
E-Z-EM Canada Inc		204211163	PACK(32909-186, 32909-187) , MANUFACTURE(32909-186, 32909-187) , LABEL(32909-187, 32909-186) , ANALYSIS(32909-187, 32909-186)

Revised: 10/2020 E-Z-EM Canada Inc