

BIOCON FORMULATIONS
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BASALOG® FOR COLOUR COPY
(FOR MALAYSIA MFG) ANNEXURE-4 [Ref. No. : BM/QA/SOP/059]
ARTWORK CODE: BM/0048/XX



BASALOG®
Insulin Glargine Injection (rDNA origin)
Solution for subcutaneous Injection only

100 IU/mL

3 mL Cartridge

*In vitro, preclinical and clinical studies have demonstrated similarity between **BASALOG®** and the reference product **Lantus** of Sanofi-Aventis, Germany. Hence, publicly available information on the reference product is included in the package leaflet. In this document when data on the reference product (**Lantus**) is referred to, the term "**Insulin glargine**" is used. When information or instructions specific to **BASALOG** is presented the term "**BASALOG®**" is used.*

NAME OF THE MEDICINAL PRODUCT

BASALOG®
Insulin Glargine Injection (rDNA origin) 100 IU/mL

COMPOSITION

Each mL contains
Insulin glargine 100 IU
m-cresol 2.7 mg (as preservative)
Excipients: q.s.

Each 3 mL cartridge contains solution for injection, equivalent to 300 IU.
Insulin glargine is produced in *Escherichia coli* by recombinant DNA technology.
For full list of excipients, see section **List of Excipients**.

PHARMACEUTICAL FORM

Solution for injection in a cartridge.
Clear colourless solution.

PHARMACOLOGICAL PROPERTIES

Pharmacodynamic Properties
Pharmacotherapeutic group: Drugs used in diabetes. Insulins and analogues for injection, long acting.
ATC code: A10AE04

Mechanism of Action

Insulin glargine is a human insulin analogue designed to have low solubility at neutral pH. It is completely soluble at the acidic pH of the injection solution (pH 4). After injection into subcutaneous tissue, the acidic solution is neutralised leading to formation of micro precipitates. From these micro precipitates, insulin glargine is continuously released, providing a smooth, peakless, predictable concentration-time profile with a prolonged duration of action. Insulin receptor binding: insulin glargine is very similar to human insulin with respect to insulin receptor binding kinetics and can therefore, be considered to mediate a similar effect via the insulin receptor.
The primary activity of insulin, including insulin glargine, is regulation of glucose metabolism. Insulin and its analogues lower blood glucose levels by stimulating peripheral glucose uptake, especially by skeletal muscle and fat, and by inhibiting hepatic glucose production. Insulin inhibits lipolysis in the adipocyte, inhibits proteolysis and enhances protein synthesis.

Clinical Studies-Efficacy Results

The clinical efficacy of **BASALOG®** was assessed in an open label, randomised, multi-centric, comparative, phase 3 study in Type 1 Diabetes Mellitus patients with Lantus.

The results established non-inferiority of **BASALOG®** compared to the reference product (**Lantus**), with respect to change in HbA1c. The changes in FPG, PPG and 7-point glucose were comparable between the 2 study arms. The proportion of patients who achieved target HbA1c <7% was comparable between groups. Mean insulin dose was also comparable between the 2 arms. Compliance was good during the study, with average compliance >98% for both basal and pre-meal soluble insulin which was comparable for both study arms. Overall the 2 study treatments were comparable with respect to efficacy.

This study established the non inferiority of **BASALOG®** compared to Lantus with respect to primary efficacy parameter HbA1c and also supports the safety and efficacy of **BASALOG®** in the treatment of patients of diabetes mellitus.

The following data for clinical efficacy in the patients administered with Insulin glargine is summarised from the publicly available information of Lantus.

In clinical pharmacology studies, intravenous insulin glargine and human insulin have shown to be equipotent when given at the same doses. As with all insulins, the time course of action of insulin glargine may be affected by physical activity and other variables.

In euglycaemic damp studies in healthy subjects or in patients with type 1 diabetes, the onset of action of subcutaneous insulin glargine was slower than neutral protamine Hagedorn (NPH) human insulin. The efficacy profile of insulin glargine was relatively constant with no pronounced peak and the duration of its effect was prolonged compared to NPH human insulin.

The longer duration of action (up to 24 hours) of insulin glargine is directly related to its slow rate of absorption and supports once daily subcutaneous administration. The time course of action of insulins, including insulin glargine, may vary between individuals and/or within the same individual.

In a clinical study, symptoms of hypoglycaemia or counter-regulatory hormone responses were similar on administration of after intravenous insulin glargine and human insulin both in healthy volunteers and in patients with type 1 diabetes.

In an another 5 year NPH-controlled study (NPH given bid) in 1024 type 2 diabetic patients, in which progression of retinopathy by 3 or more steps on the Early Treatment Diabetic Retinopathy Study (ETDRS) scale was investigated by fundus photography. No significant difference was seen in the progression of diabetic retinopathy when insulin glargine was compared to NPH insulin.

Paediatric Population

In a randomised, controlled clinical study, paediatric patients (age range 6 to 15 years) with type 1 diabetes (n=349) were treated for 28 weeks with a basal bolus insulin regimen where regular human insulin was used before each meal. Insulin glargine was administered once daily at bedtime and NPH human insulin was administered once or twice daily. Similar effects on glycohaemoglobin and the incidence of symptomatic hypoglycaemia were observed in both treatment groups, however fasting plasma glucose decreased more from baseline in the insulin glargine group than in the NPH group. There was less severe hypoglycaemia in the insulin glargine group as well. One hundred and forty three patients treated with insulin glargine in this study continued treatment with insulin glargine in an uncontrolled extension study with mean duration of follow up of 2 years. No new safety signals were seen during this extended treatment with insulin glargine.

A crossover study comparing insulin glargine plus Ispro insulin to NPH plus regular human insulin (each treatment administered for 16 weeks in random order) in 26 adolescent type 1 diabetic patients aged 12 to 18 years was also performed. As in the paediatric study described above, fasting plasma glucose reduction from baseline was greater in the insulin glargine group than in the NPH group. HbA1c changes from baseline were similar between treatment groups, however blood glucose values recorded overnight were significantly higher in the insulin glargine/ Ispro group than the NPH/regular group, with a mean nadir of 5.4 mM vs 4.1 mM. Correspondingly, the incidences of nocturnal hypoglycaemia were 32% in the insulin glargine / Ispro group vs 52% in the NPH / regular group.

A 24-week parallel group study was conducted in 125 children with type 1 diabetes mellitus aged 2 to 6 years, comparing insulin glargine given once daily in the morning to NPH insulin given once or twice daily as basal insulin. Both groups received bolus insulin before meals. The primary aim of demonstrating non-inferiority of insulin glargine to NPH in all hypoglycaemic events not met and there was a trend to an increase of hypoglycaemia events with insulin glargine [insulin glargine: NPH rate ratio (95% CI) = 1.18 (0.97-1.44)]. Glycohaemoglobin and glucose variabilities were comparable in both treatment groups. No new safety signals were observed in this study.

Pharmacokinetics Properties

A randomised, double blind, single dose, 3-way crossover Euglycaemic damp study in subjects with Type 1 diabetes mellitus is conducted to compare the relative pharmacokinetics and pharmacodynamics properties of **BASALOG®** with Lantus. This comparative study showed that **BASALOG®** is bioequivalent to Lantus.

The following data for the pharmacokinetics in various subjects administered with Insulin glargine is summarised from publicly available information of Lantus.

In healthy subjects and in diabetic patients, insulin glargine serum concentrations indicated a slower and much more prolonged absorption and showed a lack of a peak after subcutaneous injection of insulin glargine in comparison to human NPH insulin. Concentrations were thus consistent with the time profile of the pharmacodynamic activity of insulin glargine. Insulin glargine injected once daily will reach steady state levels in 2 to 4 days after the first dose. When given intravenously the elimination half-life of insulin glargine and human insulin were comparable.

In patient with diabetes, insulin glargine is partly degraded in the subcutaneous tissue at the carboxyl terminus of the chain with formation of the active metabolites 21A-Gly-insulin and 21A-Gly-des-30B-Thr-insulin. Unchanged insulin glargine and degradation products are also present in plasma. In clinical studies, subgroup analyses based on age and gender did not indicate any difference in safety and efficacy in insulin glargine-treated patients compared to the entire study population.

Paediatric Population

Pharmacokinetics in children aged 2 to less than 6 years with type 1 diabetes mellitus was assessed in one clinical study. Plasma "trough" levels of insulin glargine and its main M1 and M2 metabolites were measured in children treated with insulin glargine, revealing plasma concentration patterns similar to adults, and providing no evidence for accumulation of insulin glargine or its metabolites with chronic dosing.

Preclinical Safety Data

Nonclinical data of insulin glargine reveal no special hazard for humans based on conventional studies of safety pharmacology, repeated-dose toxicity, genotoxicity, carcinogenic potential, toxicity to reproduction.

CLINICAL PARTICULARS

Therapeutic Indications

For the treatment of adults, adolescents and children of 2 years or above with diabetes mellitus, where treatment with insulin is required.

Posology and Method of Administration

Posology

Injection sites should always be rotated within the same region in order to reduce the risk of lipodystrophy and cutaneous amyloidosis.

BASALOG® contains insulin glargine, an insulin analogue, and has a prolonged duration of action.

BASALOG® should be administered once daily at any time but at the same time each day.

The **BASALOG®** dose regimen (dose and timing) should be individually adjusted. In patients with type 2 diabetes mellitus, **BASALOG®** can also be given together with orally active antidiabetic medicinal products.

Elderly Population (>65 years old)

In the elderly, progressive deterioration of renal function may lead to a steady decrease in insulin requirements.

Renal Impairment

In patients with renal impairment, insulin requirements may be diminished due to reduced insulin metabolism.

Hepatic Impairment

In patients with hepatic impairment, insulin requirements may be diminished due to capacity for gluconeogenesis and reduced insulin metabolism.

Paediatric Population

Safety and efficacy of insulin glargine have been established in adolescents and children of 2 years and above. No clinical study safety data are available in children below 2 years of age.

Initiation of **BASALOG® Therapy:**

The recommended starting dose of **BASALOG®** in patients with type 1 diabetes should be approximately one-third of the total daily insulin requirements. Short-acting, pre-meal insulin should be used to satisfy the remainder of the daily insulin requirements.

Based on published information the recommended starting dose on an average is 10 IU once daily and subsequently adjusted according to the patient's need to a total daily dose ranging from 2 to 100 IU, however doses needs to be individualised by the prescriber for a particular patient.

Transition From Other Insulins to **BASALOG®**

When changing from a treatment regimen with an intermediate or long-acting insulin to a regimen with **BASALOG®**, a change of the dose of the basal insulin may be required and the concomitant antidiabetic treatment may need to be adjusted (dose and timing of additional regular insulins or fast-acting insulin analogues or the dose of oral antidiabetic medicinal products). To reduce the risk of nocturnal and early morning hypoglycaemia, patients who are changing their basal insulin regimen from twice daily NPH insulin to a once daily regimen with **BASALOG®** should reduce their daily dose of basal insulin by 20% to 30% during the first week of treatment. During the first weeks, the reduction should, at least partially, be compensated by an increase in mealtime insulin, after this period the regimen should be adjusted individually. As with other insulin analogues, patients with high insulin doses may experience an improved insulin response with **BASALOG®** because of antibodies to human insulin. Close metabolic monitoring is recommended during transition and in the initial weeks thereafter. With improved metabolic control and resulting increase in insulin sensitivity a further adjustment in dose regimen may become necessary. Dose adjustment may also be required, for example, if the patient's weight or life-style changes, change of timing of insulin dose or other circumstances arise that increase susceptibility to hypo or hyperglycaemia (see section **Special Warnings and Precautions for Use**).

Interchangeability and Automatic Substitution

BASALOG® has been developed as a similar biological medicinal product to Lantus and has been shown to have a comparable quality, safety and efficacy profile to Lantus. Therefore, interchangeability with the reference product Lantus may be considered if this is in agreement with the treating physician. However, automatic substitution (i.e. the practice by which a different product to that specified on the prescription is dispensed to the patient without the prior informed consent of the treating physician) and active substance-based prescription cannot apply to biologicals, including biosimilars. Such a differentiating approach towards biologicals ensures that treating physicians can make informed decision about treatments it is in the interest of patient's safety.

Method of Administration

BASALOG® is administered subcutaneously and should not be given intravenously. The prolonged duration of action of **BASALOG®** is dependent on injection into subcutaneous tissue. Intravenous administration of the usual subcutaneous dose could result in severe hypoglycaemia.

There are no clinically relevant differences in serum insulin or glucose levels after abdominal, deltoid or thigh administration of **BASALOG®**. The prolonged duration of action of **BASALOG®** is dependent on injection into subcutaneous space. As with all insulins, injection sites within an injection area (abdomen, thigh, or deltoid) must be rotated from 1 injection to the next.

In published clinical studies, there was no relevant difference in insulin glargine absorption after abdominal, deltoid or thigh subcutaneous administration. As for all insulins, the rate of absorption, and consequently the onset and duration of action, may be affected by exercise and other variables.

BASALOG® must not be mixed with any other insulin or diluted. Mixing or diluting can change its time or action profile and may cause hypoglycaemia.

Instructions to be Given to the Patient on How to Handle **BASALOG® Cartridge**

1. The **BASALOG®** cartridges are designed to be used with INSUPen EZ and INSUPen Pro. Detailed instruction accompanying the delivery system must be followed.
2. If the patient is treated with **BASALOG®** cartridge and another insulin cartridge, two insulin delivery systems should be used, one for each type of insulin.
3. The **BASALOG®** cartridges are for single person use only, and should not be shared with anyone else.
4. The **BASALOG®** cartridges are not to be refilled.

Before using **BASALOG® cartridge**

- Check the label to make sure it is the right type of insulin.
- Remove the cartridge from the blister pack by pushing through the foil side of the packaging.
- Appearance of air bubbling inside is a normal phenomenon, vigorous shaking immediately before the dose is withdrawn may also result in the formation of air bubbles which could cause dosage errors; in that case tap the cartridge holder gently with your finger. A small air bubble may remain in the container after tapping; this small air bubble will not affect your dose.
- Detailed instruction accompanying the delivery system must be followed.
- If your INSUPen EZ or INSUPen Pro with the cartridge inside are in cold storage, take them out 1 to 2 hours before you inject to allow them to warm up. Cold insulin is more painful to inject.
- To prevent contamination always use a new pen needle for each injection.

Do not use **BASALOG® cartridge**

- In insulin infusion pumps.
- If the cartridge or the device containing the cartridge is dropped, damaged or crushed there is a risk of leakage of insulin.
- If it has not been stored correctly or if it has been frozen.
- If the liquid appears cloudy, coloured or has some suspended matter.

Preparation and Handling:

BASALOG® should be inspected visually prior to administration. **BASALOG®** must only be used if the solution is clear and colourless with no visible particles.

Mixing and diluting:

BASALOG® must not be diluted or mixed with any other insulin or solution.

Contraindications

Hypersensitivity to the active substance or to any of the excipients.

Special Warnings and Precautions for Use

Traceability

In order to improve the traceability of biosimilar medicinal products, the name and the batch number of the administered product should be clearly recorded.

BASALOG® is not the insulin of choice for the treatment of diabetic ketoacidosis. Instead, regular insulin administered intravenously is recommended in such cases.

In case of insufficient glucose control or a tendency to hyper- or hypoglycaemic episodes, the patient's adherence to the prescribed treatment regimen, injection sites and proper injection technique and all other relevant factors must be reviewed before dose adjustment is considered.

Transferring a patient to another type or brand of insulin should be done under strict medical supervision. Changes in strength, brand (manufacturer), type (regular, NPH, lente, long-acting, etc.), origin (animal, human, human insulin analogue) and/or method of manufacture may result in the need for a change in dose.

Patients must be instructed to perform continuous rotation of the injection site to reduce the risk of developing lipodystrophy and cutaneous amyloidosis. There is a potential risk of delayed insulin absorption and worsened glycaemic control following insulin



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injections at sites with these reactions. A sudden change in the injection site to an unaffected area has been reported to result in hypoglycaemia. Blood glucose monitoring is recommended after the change in the injection site, and dose adjustment of antidiabetic medications may be considered.

Hypoglycaemia

The time of occurrence of hypoglycaemia depends on the action profile of the insulins used and, may therefore change when the treatment regimen is changed. Due to more sustained basal insulin supply with **BASALOG®**, less nocturnal but early morning hypoglycaemia can be expected.

Particular caution should be exercised, and intensified blood glucose monitoring is advisable in patients in whom hypoglycaemic episodes might be of particular clinical relevance, such as in patients with significant stenosis of the coronary arteries or of the blood vessels supplying the brain (risk of cardiac or cerebral complications of hypoglycaemia) as well as in patients with proliferative retinopathy, particularly if not treated with photocoagulation (risk of transient amaurosis following hypoglycaemia).

Patients should be aware of circumstances where warning symptoms of hypoglycaemia are diminished. The warning symptoms of hypoglycaemia may be changed, be less pronounced or be absent in certain risk groups. These include patients:

- in whom glycaemic control is markedly improved,
- in whom hypoglycaemia develops gradually,
- who are elderly,
- who are transferred from animal insulin to human insulin,
- in whom an autonomic neuropathy is present,
- with a long history of diabetes,
- suffering from a psychiatric illness,
- receiving concurrent treatment with certain other medicinal products (see section **Drug Interactions**).

Such situations may result in severe hypoglycaemia (and possibly loss of consciousness) prior to the patient's awareness of hypoglycaemia. The prolonged effect of subcutaneous insulin glargine may delay recovery from hypoglycaemia. If normal or decreased values for glycated haemoglobin are noted, the possibility of recurrent, unrecognised (especially nocturnal) episodes of hypoglycaemia must be considered.

Adherence of the patient to the dose and dietary regimen, correct insulin administration and awareness of hypoglycaemia symptoms are essential to reduce the risk of hypoglycaemia. Factors increasing the susceptibility to hypoglycaemia require particularly close monitoring and may necessitate dose adjustment. These include:

- change in the injection area,
- improved insulin sensitivity (eg, by removal of stress factors),
- unaccustomed, increased or prolonged physical activity,
- intermittent illness (eg, vomiting, diarrhoea),
- inadequate food intake,
- missed meals,
- alcohol consumption,
- certain uncompensated endocrine disorders, (eg, in hypothyroidism and in anterior pituitary or adrenocortical insufficiency),
- concomitant treatment with certain other medicinal products.

BASALOG® contains metacresol, which may cause allergic reactions.

Intercurrent Illness

Intercurrent illnesses requires intensive metabolic monitoring. In many cases urine tests for ketones are indicated, and often it is necessary to adjust the insulin dose. The insulin requirement is often increased. Patients with type 1 diabetes must continue to consume at least a small amount of carbohydrates on a regular basis, even if they are able to eat only little or no food, or in conditions where they are vomiting and they must never omit insulin entirely.

Combination of **BASALOG® with Pioglitazone**

Cases of cardiac failure have been reported in publicly available information of Lantus, when pioglitazone was used in combination with insulin glargine, especially in patients with risk factors for development of cardiac heart failure. This should be kept in mind if treatment with the combination of pioglitazone and **BASALOG®** is considered. If the combination is used, patients should be observed for signs and symptoms of heart failure, weight gain and oedema. Pioglitazone should be discontinued if any deterioration in cardiac symptoms occurs.

Insulin antibodies

Insulin administration may cause insulin antibodies to form. In rare cases, the presence of such insulin antibodies may necessitate adjustment of the insulin dose in order to correct a tendency to hyper- or hypoglycaemia (see section **Undesirable effects**).

Medication errors

Medication errors have been reported in which other insulins, particularly short-acting insulins, have been accidentally administered instead of insulin glargine. Insulin label must always be checked before each injection to avoid medication errors between insulin glargine and other insulins

Drug Interactions

A number of substances affect glucose metabolism and may require dose adjustment of insulin glargine.

Substances that may enhance the blood-glucose-lowering effect and increase susceptibility to hypoglycaemia include oral antidiabetic medicinal products, angiotensin converting enzyme (ACE) inhibitors, disopyramide, fibrates, fluoxetine, monoamine oxidase (MAO) inhibitors, pentoxifylline, propoxyphene, salicylates and sulphonamide antibiotics.

Substances that may reduce the blood-glucose-lowering effect include corticosteroids, danazol, diazoxide, diuretics, glucagon, isoniazid, oestrogens and progestogens, phenothiazines, somatostatin, sympathomimetic medicinal products (e.g. epinephrine [adrenaline], salbutamol, terbutaline), thyroid hormones, atypical antipsychotic medicinal products (eg, clozapine and olanzapine) and protease inhibitors.

Beta-blockers, dionidine, lithium salts or alcohol may either potentiate or weaken the blood-glucose-lowering effect of insulin. Pentamidine may cause hypoglycaemia, which may sometimes be followed by hyperglycaemia.

In addition, under the influence of sympatholytic medicinal products such as beta-blockers, clonidine, guanethidine and reserpine, the signs of adrenergic counter-regulation may be reduced or absent.

Pregnancy and Lactation

Pregnancy
A large amount of data on pregnant women (more than 1000 pregnancy outcomes) indicate no specific adverse effects of insulin glargine on pregnancy and no specific maternal/fetal or foeto/neonatal toxicity of insulin glargine.

Animal data do not indicate reproductive toxicity.

Patients with diabetes should be advised to inform their health care professional if they are pregnant or are contemplating pregnancy.

The use of insulin glargine may be considered during pregnancy, if necessary. It is essential for patients with pre-existing or gestational diabetes to maintain good metabolic control throughout pregnancy. Insulin requirements may decrease during the first trimester and generally increase during the second and third trimesters. Immediately after delivery, insulin requirements decline rapidly (increased risk of hypoglycaemia). Careful monitoring of glucose control is essential.

Breast feeding

It is unknown whether insulin glargine is excreted in human milk. No metabolic effects of ingested insulin glargine on the breastfed newborn or infant are anticipated since insulin glargine as a peptide is digested into amino acids in the human gastrointestinal tract. Breastfeeding women may require adjustments in insulin dose and diet.

Fertility

Animal studies do not indicate direct harmful effects with respect to fertility.

Effects on Ability to Drive and Use Machines

The patient's ability to concentrate and react may be impaired as a result of hypoglycaemia or hyperglycaemia or, as a result of visual impairment. This may constitute a risk in situations where these abilities are of special importance (eg, driving a car or operating machines).

Patients should be advised to take precautions to avoid hypoglycaemia whilst driving. It should be considered whether it is advisable to drive or operate machines in these circumstances.

Undesirable Effects

In a clinical study done by Biocon, the adverse events for **BASALOG®** were found to be similar in nature, frequency and severity as compared to the reference product (**Lantus**).

Hypoglycaemic events were the most common adverse events in both the treatment groups. Apart from hypoglycaemia, pyrexia was the next most common adverse event with 3 events in each study arm. Retinal adverse events reported in this study were comparable between the treatment groups. The abnormalities in the laboratory parameters were comparable between the 2 study arms and all of them were considered not clinically significant. Antibodies against **BASALOG®** were observed with the same frequency as compared to the reference product (**Lantus**).

The following data for adverse events is summarised from the publicly available information of Lantus.

Hypoglycaemia, in general the most frequent adverse reaction of insulin therapy, may occur if the insulin dose is too high in relation to the insulin requirement.

The following related adverse reactions from clinical investigations are listed below by system organ class and in order of decreasing incidence

- **Side effects reported very commonly (>1/10)**
Metabolism and nutrition disorders: hypoglycaemia
- **Side effects reported commonly (>1/100 to <1/10)**
Skin and subcutaneous tissue disorders: lipohypertrophy
General disorders and administration site conditions: injection site reactions
- **Side effects reported uncommonly (>1/1000 to <1/100)**
Skin and subcutaneous tissue disorders: lipodystrophy
- **Side effects reported rare (>1/10,000 to <1/1,000)**
Immune system disorders: Allergic reactions
Eyes disorders: visual impairment, retinopathy
General disorders and administration site conditions: Oedema
- **Side effects reported very rare (<1/10,000)**
Nervous system disorders: Dysgeusia
Musculoskeletal and connective tissue disorders: myalgia
- **Side effects reported not known (cannot be estimated from the available data)**
Skin and subcutaneous tissue disorders: Cutaneous amyloidosis

Description of selected adverse reactions

Metabolism and Nutrition Disorders

Severe hypoglycaemic attacks, especially if recurrent, may lead to neurological damage. Prolonged or severe hypoglycaemic episodes may be life-threatening. In many patients, the signs and symptoms of neuroglycaemia are preceded by signs of adrenergic counter regulation. Generally, the greater and more rapid the decline in blood glucose, the more marked is the phenomenon of counter-regulation and its symptoms.

Immune System Disorders

Immediate-type allergic reactions to insulin glargine are rare. Such reactions to insulin (including insulin glargine) or the excipients may, for example, be associated with generalised skin reactions, angio oedema, bronchospasm, hypotension and shock, and may be life threatening.

Insulin glargine administration may cause insulin glargine antibodies to form. In clinical studies, antibodies that cross-react with human insulin and insulin glargine were observed with the same frequency in both NPH-insulin and insulin glargine treatment groups. In rare cases, the presence of such insulin antibodies may necessitate adjustment of the insulin dose in order to correct a tendency to hyper- or hypoglycaemia.

Eyes Disorders

A marked change in glycaemic control may cause temporary visual impairment, due to temporary alteration in the turgidity and refractive index of the lens. Long-term improved glycaemic control decreases the risk of progression of diabetic retinopathy. However, intensive of insulin therapy with abrupt improvement in glycaemic control may be associated with temporary worsening of diabetic retinopathy. In patients with proliferative retinopathy, particularly if not treated with photocoagulation, severe hypoglycaemic episodes may result in transient amaurosis.

Skin and Subcutaneous Tissue Disorders

Lipodystrophy and cutaneous amyloidosis may occur at the injection site and delay local insulin absorption. Continuous rotation of the injection site within the given injection area may help to reduce or prevent these reactions

General Disorders and Administration Site Conditions

Injection site reactions include redness, pain, itching, hives, swelling, or inflammation. Most minor reactions to insulins at the injection site usually resolve in a few days to a few weeks. Rarely, insulin glargine may cause sodium retention and oedema particularly if previously poor metabolic control is improved by intensified insulin therapy.

Paediatric Population

In general, the safety profile for children and adolescents (18 years of age) is similar to the safety profile for adults. The adverse reaction reports received from post marketing surveillance included relatively more frequent injection site reactions (injection site pain, injection site reaction) and skin reactions (rash, urticaria) in children and adolescents (18 years of age) than in adults. No safety data from clinical studies are available in children below 2 years of age.

MALAYSIA
Packs

SENSO AVANZAM.
FEEDING WAY

MAGAZINE FIXED SIDE

oil
26/02/2013

26/02/2013

	A	B	OPEN SIZE
3 ml	20	90	228x180
10 ml	23	110	180x110
TRAY	29	170	230x170



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CUSTOMER BIOCON SDN BHD, LEVEL 7, MINER

COUNTRY MYS

INTERNAL ORDER No.
M3120080

INTERNAL PROJECT No.
MYS123101047

DESCRIPTION
DISEGNO PROSPETTO

ALL SHOWN DIMENSIONS AND TECHNICAL DATA ARE
NOT BINDING AND CAN BE MODIFIED WITHOUT NOTICE

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