



## Best Diabetes Care Food for Your Better Health

Proper nutrition and being physically active is a very important part of a healthy lifestyle when you have diabetes. Along with other benefits, following a healthy meal plan and being active can help you keep your blood sugar level in track. Along with that, special supplements for diabetic people are also now available to fulfil their nutritional needs.

Foods for special dietary uses are foods specially processed or formulated to satisfy particular dietary requirements for certain physiological or specific health conditions. It is a specially balanced oral supplement for diabetic patients who provide improved glycaemic control and lower diabetic complications.

*A Consumer VOICE Report*

Living with diabetes can be effectively managed, but can be tough at some times. With age comes increased risk for specific complications,

but with diligence and care you can properly mitigate those risks.

### Brands Tested

The test program for Comparative Testing was mainly based on product claims and FSS regulations for Foods for Special Dietary Uses. Following five brands of diabetic care foods for special dietary uses in vanilla flavour, were undertaken for comparative testing.

Rank	Overall Score (Out of 100)	Brand	Category	Flavour	Net weight, gm	MRP, Rs	Purchase price, Rs.	Best before, Month	Manufactured/Marketed By
1	92	Vidavance	Food for Special dietary use ( for Diabetic)	Vanilla	400	760	572	18	Modi Mundipharma Pvt Ltd
2	90	Prohance-D		Vanilla	400	675	540	15	Sun Pharma Industries Ltd
3	85	Pentasure Dm		Vanilla & Cinnamon	400	978	734	15	Hexagon Nutrition Pvt Ltd
4	81	Ensure		Vanilla	400	725	667	18	Abbott Health care Pvt Ltd
5	67	D-Protin		Vanilla	500	578	528	24	British Biological

Rating: >91 – Very good \*\*\*\*\*, 71-90- Good \*\*\*, 51-70 Average \*\*, 31-50- Poor \*\*, up to 30 – Very Poor \*

### CV RECOMMENDATIONS

<p><b>Top Performer</b> <b>Vidavance</b></p> <p><b>Value for Money</b> <b>Prohance-D</b></p>
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### Key Findings

- ❖ Vidavance performed on top and was ranked No 1 followed by Prohance D and Pentasure.
- ❖ Dietary fibre was highest in Vidavance followed by Prohance D and D Protin.
- ❖ Carbohydrate was lowest in Prohance D followed by Vidavance and Ensure. It was highest in D Protin.
- ❖ Pentasure had the highest protein followed by Vidavance and Ensure. In D Protin brand, Protein was found quite less than the declared value.
- ❖ Sucrose was not detected in all brands tested, thus safe for consumption by diabetics.
- ❖ Cholesterol was below the detection limit in all brands.
- ❖ Only brand Ensure claims to be clinically tested for the last 20 years for low GI.



## Comparative Product Testing



### Comparative Performance Score

Brand→	% wt	Vidavance	Prohance-D	Pentasure	Ensure	D-Protein
<b>Tests Parameters↓</b>						
Protein	15	14.25	12.39	14.37	12.33	4.50
Dietary Fibre & Soluble Fibre	13	12.78	11.45	9.91	8.84	10.68
Carbohydrate	10	8.62	8.67	7.09	7.53	3.00
Sucrose	10	10.00	10.00	10.00	10.00	10.00
MUFA	3	2.03	2.85	2.13	2.91	2.05
PUFA	3	2.88	2.74	2.54	2.28	0.90
Omega 3	4	3.12	3.28	1.20	2.56	1.20
Saturated Fat	3	2.12	2.69	2.46	2.70	2.29
Trans fat	1	1.00	1.00	1.00	1.00	1.00
Cholesterol	3	3.00	3.00	3.00	3.00	3.00
Chromium	5	5.00	4.29	5.0	3.10	3.10
Zinc	5	5.00	4.51	3.70	3.16	3.59
Acid insoluble ash	5	4.96	4.10	4.70	2.80	4.89
Moisture	5	3.43	4.38	3.34	4.58	3.03
Solubility	5	3.80	4.70	4.70	4.70	3.50
Salmonella spp., and Listeria mono-cytogenes	4	4.00	4.00	4.00	4.00	4.00
Packing & marking	4	4.00	4.00	4.00	4.00	4.00
Net Quantity	2	2.00	2.00	2.00	2.00	2.00
<b>Total Score, % (Rounded off)</b>	<b>100</b>	<b>92</b>	<b>90</b>	<b>85</b>	<b>81</b>	<b>67</b>



### Test Parameters and Results

#### Protein

Protein is an essential nutrient that is found in every cell in our bodies and in our blood stream. It plays an important role in cellular maintenance, growth and functioning of the human body. Our bodies use protein for growth, maintenance, energy, and chemical reactions. Protein requirements vary with age, physiological status and stress. High protein diet help people with diabetes to manage blood sugar levels.

All the brands except D Protin were found as per their declared values. Protein was found lowest in brand D Protin which is well below the declared value at 28g/100gm. Pentasure had the highest protein followed by Vidavance and Ensure.

#### Dietary Fibre & Soluble Fibre

There are two types of fibre: soluble and insoluble fibre. Dietary fibre is an essential component of a healthful diet, with research linking a high fibre diet with reduced risks of many health conditions. Soluble fibre is important to help capture and remove toxins and cholesterol from the body. Fibre is also important for keeping the gut healthy.

All the brands were found slightly above the declared value of dietary fibre. Brand Vidavance had highest dietary fibre followed by Prohance D and D Protin.

#### Carbohydrate

Carbohydrates are essential for a well-balanced diet and healthy body. Carbohydrates are your body's main source of energy. People with diabetes should aim to get about half of their calories from carbohydrates. The carbohydrates we consume impact our blood sugar – so balance is key. The goal is to choose foods that are rich in protein, fibre, vitamins and minerals, and low in added sugars, sodium and unhealthy fats.

Carbohydrate was lowest in Prohance D followed by Vidavance and Ensure. It was highest in D Protin.

#### Sucrose

When sucrose is digested it breaks down into fructose and glucose, which then go their own separate ways in your body. High consumption of sucrose/ sugar will lead to higher sugar level. In a diabetic care product sucrose should be zero or minimum.



Sucrose was not detected in any brand, thus safe for consumption by diabetics.

### **Monounsaturated Fatty Acids (MUFA)**

Monounsaturated fatty acids (MUFAs) are a healthy type of fat. MUFAs lower the level of bad cholesterol (LDL) in the blood and raise the good cholesterol (HDL).

MUFA was highest in Ensure followed by Prohance D and Pentasure.

### **Polyunsaturated Fats (PUFA)**

Polyunsaturated fats are considered healthy fat and can help reduce bad cholesterol levels in your blood which can lower your risk of heart disease and stroke. Sources of PUFA are walnuts, sunflower seeds, sesame seeds, peanut butter and peanuts, flaxseed, poppy seed and oil of avocado, olive and safflower.

PUFA was found highest in Vidavance followed by Prohance D and Pentasure.

### **Omega 3 Fatty Acids**

Omega-3s are nutrients you get from food (or supplements) that help build and maintain a

healthy body. They're also an energy source and help keep your heart, lungs, blood vessels, and immune system working the way they should. The best source of omega-3 fatty acids DHA and EPA is fish.

Omega 3 was found in low amount BQL to 0.55 mg/100kg. It was below quantification limit – 0.10g/100g in Pentasure and D Protin brands.

### **Saturated Fat**

Replacing foods that are high in saturated fat with healthier options can lower blood cholesterol levels and improve lipid profiles. It should be lower. Like trans fat, saturated fat are also unhealthy fats. Saturated fat generally comes from meat, dairy products, as well as coconut and palm oil, etc.

Highest saturated fat was found in Vidavance followed by D Protin and Pentasure. As compared to their declared values, it was higher in Pentasure and D Protin brands.

### **Trans Fat**

Trans fat or trans-fatty acids is considered worst type of fat. Trans fat raises your LDL ("bad") cholesterol and lowers HDL ("good") cholesterol. Trans fat should not be consumed as part of our



diet. Trans fat have been linked to heart diseases, overweight/obesity, high blood pressure, diabetes and some types of cancers.

Trans fat was not detected (below quantification limit-0.10 g/100g) in any brand.

### **Cholesterol**

Your body needs some cholesterol to make hormones, vitamin D, and substances that help you digest foods. HDL cholesterol is considered to be beneficial, or “good cholesterol”. LDL cholesterol can accumulate on the walls of your blood vessels. This can lead to a heart attack or stroke.

In all the brands, cholesterol was below the detection limit thus safe for consumption.

### **Chromium**

Chromium is an essential mineral that the body needs in trace amounts. It is naturally present in a wide variety of foods, though only in small amounts. Chromium enhances the action of the hormone insulin. Chromium deficiency may lead to high blood sugar levels, weight loss and confusion.

Chromium was found in low amount (micrograms). It was highest in Vidavance and Pentasure and followed by Prohance D.

### **Zinc**

Zinc is needed for the body's defensive (immune) system to properly work. It plays a role in cell division, cell growth, wound healing, and the breakdown of carbohydrates. Zinc deficiency is characterized by growth retardation, loss of appetite, and impaired immune function. Zinc is known to play a major role in the stabilization of insulin.

Zinc was found highest in Vidavance and thus scored full marks followed by Prohance D and Pentasure.DM.

### **Acid Insoluble Ash**

Acid insoluble ash indicates the presence of sand, dirt and dust. It should be negligible / minimum. Acid insoluble ash was found negligible in Vidavance followed by D Protin and Pentasure.

### Physicochemical Tests

#### Moisture

The presence of moisture is inherent in food and to some extent is good for maintaining its taste and odour but excess / inappropriate amounts is damaging. Moisture is an important factor in food quality, preservation, and resistance to deterioration. Moisture was found lowest in Ensure and highest in D Protin.

#### Solubility

Solubility is defined as the maximum amount of a substance that will dissolve in a given amount of solvent at a specified temperature. Pentasure, Prohance-D and Ensure had better solubility among the brands tested.

#### Microbiological Tests

Microbiological contamination is a very serious issue for food products. Microorganisms are responsible for many foods borne disease. As per FSS Regulations, we conducted microbiological tests for Salmonella spp. and Listeria monocytogenes.

#### Salmonella

Salmonella is a genus of gram-negative bacteria of the family Enterobacteriaceae and may cause gastroenteritis and focal infections. Salmonella shall be absent in 25 g. Salmonella was absent in all the brands tested.

#### Listeria Monocytogenes

Listeria monocytogenes is pathogenic bacteria that causes the infection listeriosis. All brands were well below the requirement.

#### Packaging

Packing plays an important role in maintaining the consistent quality of the product, preventing its deterioration, and increasing the shelf life. Packaging should be proper because it prevents it from deterioration and increases the shelf life. The product should be packed in food grade packaging. Four brands were packed in plastic box and

Pentasure was packed in a metal box. These packs can be reused as a container.

#### Marking

The product shall have following information marked on its packing:

- a) Name of the product
- b) Trade name, if any
- c) Name and address of manufacturer
- d) Batch or code number
- e) Net quantity in gram
- f) Month and year of manufacture
- g) The words 'Best before' (month and year to be indicated)
- h) FSSAI license number
- i) Logo indicating 'vegetarian' or 'non-vegetarian' status
- j) Storage *information*
- k) Maximum Retail Price (MRP)
- l) Customer-care details

All the brands were marked with the required labelling requirements.

#### 22 Net quantity

Net weights of all the brands were found as per declaration.

#### Tips for Diabetic Care

- Make healthy eating and physical activity part of your daily routine.
- Maintain a healthy weight. Monitor your blood sugar, and follow your health care provider's instructions for managing your blood sugar level.
- Take your medications as directed by your health care provider.
- If you are suffering from diabetes, you need to check on your food and drinks. There are special packs of protein powder for diabetes.