

ISOFLAVONES: *The Difference Is in the Ratio*

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ISOFLAVONES: *The Difference Is in the Ratio*



SOY ISOFLAVONE CONCENTRATES MADE FROM WHOLE SOYBEANS VS. SOY GERM

NOT ALL SOY ISOFLAVONE CONCENTRATES ARE CREATED EQUAL. Although whole soybean-derived and soy germ-derived products do contain the same individual isoflavones, their isoflavone ratios are significantly different. The concentrates that show the greatest benefits are those which, like Novasoy® brand soy isoflavones, are extracted to maintain an isoflavone ratio close to the whole soybean.

Why should you buy whole soybean isoflavone concentrates like Novasoy? Read on, and learn why the difference is in the ratio.

BENEFITS OF ISOFLAVONES

- Clinical studies consistently show that soy isoflavones like Novasoy lower the incidence of hot flashes.
- In fact, researchers say soy isoflavones like Novasoy are a natural alternative for reducing menopausal symptoms like hot flashes.
- Soy isoflavones may also affect arterial health. Preliminary research suggests that soy isoflavones may help keep arteries flexible, and healthy arteries contribute to a healthy cardiovascular system.



WHAT ARE ISOFLAVONES?

Isoflavones are natural plant nutrients that exhibit agonist and antagonist estrogenic mechanisms. Genistein and daidzein are two isoflavones found in soybeans. In fact, they're the isoflavones found in the highest amounts in soybeans, and those that provide the most powerful benefits for people.

Though many different isoflavones exist, the primary types in soy are genistein, daidzein, and glycitein. These are also the primary isoflavones found in Novasoy brand soy isoflavones.

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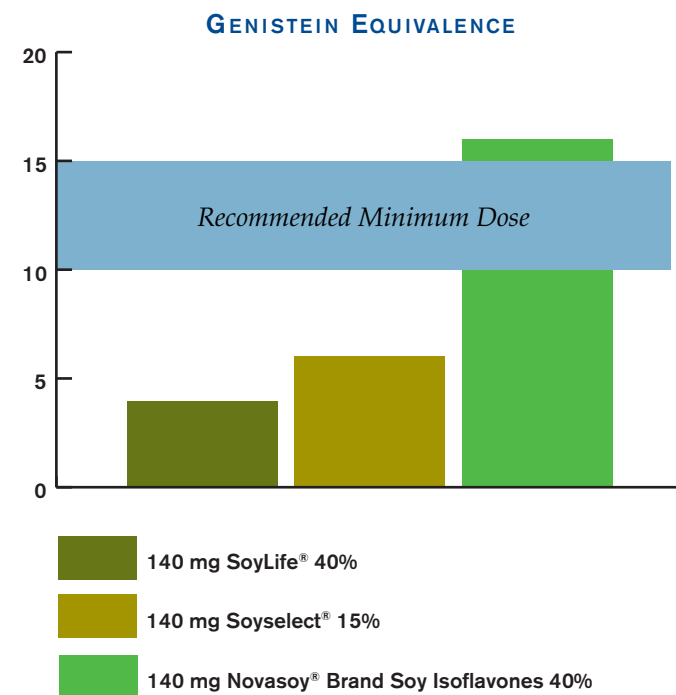
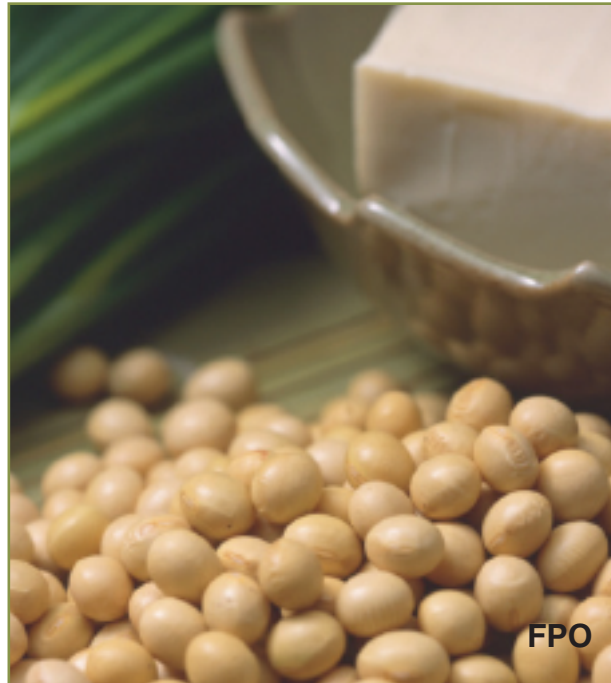
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WHERE ARE ISOFLAVONES FOUND?

In our diets, soy is the primary source for isoflavones, though you'll also find them in mung beans, red clover, alfalfa sprouts, kudzu*, chickpeas, and other plant foods.

Soy isoflavone concentrates such as Novasoy® have a natural ratio much like the one found in foods such as tofu, which is made from whole soybeans and recognized as a smart meal choice.

COMPARISON OF ISOFLAVONE AND PHYTOESTROGEN CONTENTS OF SOME FOOD ITEMS (mg/kg as is)

Food Item	Daidzein	Genistein	Coumestrol [†]	Formononetin	Biochanin A
Soybeans (dry)	466	738	0.5	0.7	0.1
Green beans (fresh)	ND	ND	ND	1.5	Trace
Lima beans (dry)	0.2	0.1	15	0.1	ND
Garbanzo beans (dry)	0.4	0.6	ND	7	16.1
Pinto beans (dry)	0.1	2.6	18	Trace	3
Clover sprouts	ND	4	281	23	4
Alfalfa sprouts*	ND	ND	23.4	1305	ND
Lentils	ND	ND	ND	0.1	ND

THE WHOLE SOYBEAN VS. SOY GERM

A whole soybean is much higher in genistein forms than soy germ, a common source for isoflavone concentrate. Soybeans typically contain 0.1% isoflavones, predominantly in glucoside derivatives. That includes at least 50% genistein, about 40% daidzein, and up to 10% glycitein forms.

In contrast, soy germ isoflavone products typically contain about 40% daidzein, 40% glycitein, and 20% genistein forms.

*Neither red clover nor kudzu contain appreciable amounts of genistein.

[†]Coumestrol is not an isoflavone but a coumestan
ND=not detected

Source: USDA, Iowa State University Database on the Isoflavone Content of Foods, Release 1.2 - 2000



Compare the ratio of genistein, daidzein, and glycitein in tofu and soy germ to the ratio in isoflavone concentrates like Novasoy®:

Novasoy brand soy isoflavones **1.3 : 1 : 0.3***
Tofu **1.3 : 1 : 0.3**
Soy germ **0.3 : 1.1 : 1**

*genistein:daidzein:glycitein

Soy isoflavone concentrates like Novasoy, which originate from whole soybeans, provide greater benefits due to their high concentration of genistein forms. Through a proprietary process, we extract Novasoy brand soy isoflavones to closely match the natural isoflavone ratios of soybeans and unfermented soyfoods.



THE POWER OF A SOY PIONEER

Beyond Novasoy soy isoflavones, ADM is a soyfoods innovator. Our portfolio includes a wide range of naturally derived ingredients designed to provide food processors functionality and high performance in a variety of applications.

With vast knowledge and experience, our global R&D team works closely with customers to provide application, formulation, and technical support. In our state-of-the-art pilot plants, laboratories, and culinary facilities, we create real-world solutions to new challenges every day.

NOVASOY® BRAND SOY ISOFLAVONE CONCENTRATE

Isoflavones (min.) in the glucoside form	40%
Ratio of genistein, daidzein, glycitein forms	1.3 : 1 : 0.3
Other natural soy phytocomponents (typical)	41%
Protein N x 6.25	7 to 12%
Ash (max.)	4%
Moisture (max.)	6%
Appearance	Fine powder