

Sustained Release Caffeine Tablets

Enable your consumers to **take control of their energy and focus**

Carbopol® polymers are reliable, proven tools for creating high-value nutraceutical products.

Sustained release caffeine tablets formulated with Carbopol polymers offer key features and benefits for consumers:

- **Smaller, easier-to-swallow** tablets
- **Long-lasting energy and focus** (up to 12 hours *in vitro*)
- Stable, consistent delivery **without a crash**
- **Consistent dosing** from tablet-to-tablet
- Compatible with **multiple strengths** (100 and 200 mg)

Caffeine Sustained Release Tablets with Carbopol Polymers

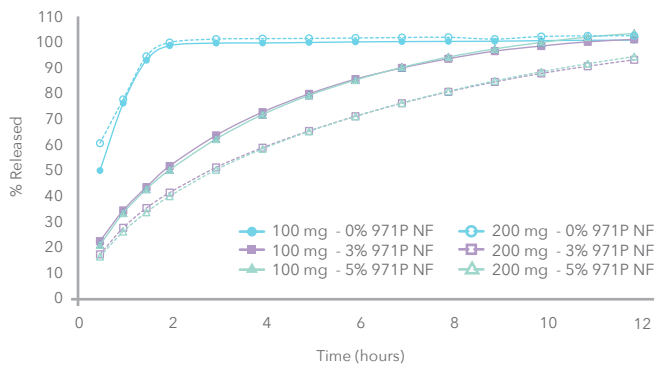
Materials and Methods


Property	Value
Sustained Release Polymer	Carbopol® 971P NF Polymer
Carbopol Polymer Inclusion Level	0 to 5%
Caffeine Strength	100 and 200 mg
Manufacturing Method	Direct Compression

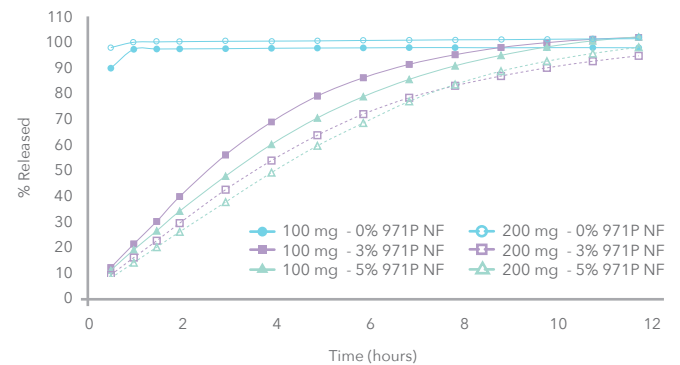
Results

- Carbopol Polymers enabled **8 to 12 hours of *in vitro* caffeine release**
- Sustained release was achieved with **as little as 3% Carbopol 971P NF polymer**
- Good control over release was demonstrated at **100 mg and 200 mg strengths**
- Performance was maintained in **simulated stomach and small intestine**

 **Figure 1: Caffeine Release from 100 mg and 200 mg Tablets in 0.1N HCl (Stomach)**



 **Figure 2: Caffeine Release from 100 mg and 200 mg Tablets in pH 6.8 Phosphate Buffer (Intestines)**



Start your project today

Visit go.lubrizol.com/CarbopolForNutra to learn more.

