

4282-008

Key Words: Extract of Cartilage, Sticky, Very Hygroscopic, Direct Compression
JRS Products: PROSOLV® SMCC 90, EMCOMPRESS®, ARBOCEL® P 290, VIVASOL®, PRUV®

Extract of Cartilage Direct Compression

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Summary

Cartilage is the tough but flexible connective tissue that cushions bones at joint sites throughout the body. It also supports and gives shape to other structures including the nose, ears, and larynx. Extract of cartilage (commonly derived from the dogfish shark) is sold as a dietary supplement to ease symptoms of arthritis, psoriasis, inflammatory disorders in the

gastrointestinal tract, and diabetic retinopathy, among others. Cartilage extract is hygroscopic (absorbing water from the air) and thus prone to having a high water content that makes it very sticky. It was possible to develop a simple direct compression formulation for cartilage extract using **PROSOLV® SMCC 90**.

Formulation

	Active content [mg]	mg/tablet	Contribution [%]
Extract of Cartilage	186.9	186.9	35.6
Ascorbic Acid (Crystalline)		43.5	8.3
PROSOLV® SMCC 90 (Silicified Microcrystalline Cellulose)		199.0	37.9
EMCOMPRESS® (Calcium Hydrogen Phosphate Dihydrate)		70.3	13.4
ARBOCEL® P 290 (Powdered Cellulose)		5.25	1.0
Talcum		9.45	1.8
VIVASOL® (Croscarmellose Sodium)		8.0	1.5
PRUV® (Sodium Stearyl Fumarate)		2.6	0.5
Total		525.0	100.0

Procedure

Blending:

The Extract of Cartilage, Ascorbic Acid, **PROSOLV® SMCC 90** and **EMCOMPRESS®** were blended for 15 minutes. **ARBOCEL® P 290**, Talcum and **VIVASOL®** were added and blended for another 10 minutes. After that **PRUV®** was added and mixed for 3 minutes. The powder mixture was ready for direct compression.

Equipment:

Tablet Press:	Korsch EK 0 eccentric press, 13 mm punch
Turbula Mixer:	Type T2A
Hardness Tester:	Schleuniger 2E
Disintegration Tester:	Pharmatest Standard PTZ
Friability Tester:	Pharmatest PTF

Tablet Characteristics

Tablet Weight:	525 mg
Tablet Diameter:	13 mm
Compression Force:	18 kN
Crushing Strength:	75 N
Friability:	0.26 %
Disintegration Time:	15 min

Disclaimer: The information provided is based on thorough research and is believed to be completely reliable. Application suggestions are given to assist our customers, but are for guidance only. Circumstances in which our material is used vary and are beyond our control. Therefore, we cannot assume any responsibility for risks or liabilities, which may result from the use of this technical advice.