

Flow Characteristics of Bone Graft Materials Tested with the KG[®]1 Spinal Graft Delivery Tool

Product	KDL Flowability Index
ICBG (Iliac Crest Bone Graft, milled)	3*
Allosource Cancellous Chips	3
Bioventus Amp 1	1
Geistlich Biologics	2
Medtronic Grafton	2
Medtronic Orthoblend	2
NuTech NuCell	4*
OrthoFix Trinity	2
Stryker Vitoss	2
Synthes Vivagen	2
Zimmer Biologics Cellentra	2
Zimmer Biologics Primagen	4*

Data as of 3/31/18

Kleiner Device Labs has done hands-on, informal, testing of a wide range of commercially available bone graft materials to ascertain ease of flow characteristics. These tests were not intended to recommend any material over another, nor to supersede indications for use.

These materials were tested with a stock KG 1 spinal bone graft delivery tool, testing both recommended and excessive amounts of material loaded into the device's cannula. Under the Kleiner Device Labs rating system, **1 indicates easy flowability with normal pressure on the plunger; 4 indicates very difficult or non-flow characteristics.**

These tests were made of stock graft materials. Individual surgeons sometimes utilize their own blends of materials, which should be expected to affect flow results. These testing results are shared to provide surgeons with guidelines. Kleiner Device Labs recommends physicians test their own blends in a device prior to first surgical use of the KG 1. Surgeons should follow the Instructions For Use (IFU), provided with the product packaging, as well as available on the company's web site.

For more information, to request testing of other commercial or specially formulated bone graft materials, for copies of studies, or for trial samples of the KG 1, please contact the company at 650-720-4766 x802.



www.kleinerlabs.com

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