HIGHLY PURIFIED AND SAFE GELATINS FOR REGENERATIVE MEDICINE APPLICATIONS

A new biomaterial for tissue engineering, stem cell-based therapies and the production of biomolecule delivery systems is available now that is purer than many other alternatives on today’s market: Rousselot’s X-Pure gelatin. The X-Pure gelatin range comes with the world’s lowest endotoxin levels, making it one of the purest and safest options for most applications being developed in the exciting, game changing market for regenerative medicine.

Reaching Further Together
GELATIN, A HIGHLY FAVORED BIOMATERIAL

One of the challenges in the rapidly growing field of regenerative medicine is the generation of suitable biomaterials that closely mimic the body’s own matrix. Gelatin fits this profile and is therefore a highly favored biomaterial in today’s regenerative medicine applications. Gelatin-based hydrogels provide favorable cell growth conditions, while gelatin-based delivery systems are well suited for the targeted release of interferon, antibiotics, siRNA, growth factors and anticancer medicine.

LOW-ENDOTOXIN GELATIN CAN IMPROVE RESEARCH OUTCOMES AND PATIENT SAFETY

Especially in in-body applications, endotoxins can trigger unfavorable immune response. They have also been shown to negatively affect cell growth and to alter stem cell differentiation1. Low-endotoxin gelatins provide the best possible purity and safety profile and can therefore significantly improve research outcomes and patient safety. Check the table below for details.

<table>
<thead>
<tr>
<th>Type</th>
<th>Endotoxin level (EU/g)</th>
<th>Targeted gel strength* (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Pure® 100 P</td>
<td>≤100</td>
<td>100 - 180</td>
</tr>
<tr>
<td>X-Pure® 20 P</td>
<td>≤20</td>
<td>300 - 400</td>
</tr>
<tr>
<td>X-Pure® 10 P</td>
<td>≤10</td>
<td>300 - 400</td>
</tr>
<tr>
<td>X-Pure® 20 B</td>
<td>≤20</td>
<td>240 - 360</td>
</tr>
<tr>
<td>X-Pure® 10 B</td>
<td>≤10</td>
<td>240 - 360</td>
</tr>
</tbody>
</table>

*Measured at 6.67%, 10°C.

References
2 These levels are determined by means of the Charles River LAL (Limulus Amebocyte Lysate) assay, an FDA compliant method.

KEY BENEFITS OF ROUSSELOT® X-PURE® AND GELATIN IN GENERAL:

Gelatin has many benefits for the regenerative medicine market. Rousselot’s X-Pure takes those benefits further by offering gelatin of extreme purity.

X-Pure benefits
- A pure gelatin with exceptionally low endotoxin levels
- The convenience of a one-stop global shop for a full range of purified gelatins suitable for regenerative medicine applications (acid porcine skin and lime bovine bone gelatins available).

General gelatin benefits
- Natural and biocompatible, blends easily with other biopolymers
- Generally Recognized As Safe (GRAS) by the US Food and Drug Administration (US FDA) and compliant with the US, European and Japanese pharmacopeia
- Non-immunogenic
- Customizable functionalities for 3D printing (crosslinking with methacrylamide)
- Presence of RGD cell recognition sequences (Arginine-Glycine-Aspartic acid) for integrin-mediated cell attachment (beneficial for cell adhesion).

For more information and/or an experimental sample of X-Pure®, please contact us at:
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