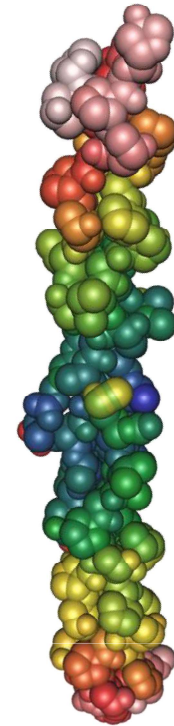


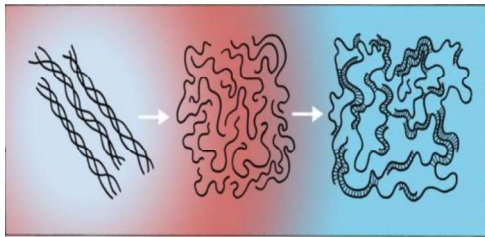
Structured acid-soluble collagen gives superior cell scaffold performance compared with gelatin.

Gelatin (collagen that has lost its structure during processing) has traditionally been used in food, cosmetics and medicine due to its ready availability, cost and similarity to collagen. However, collagen's essential structure is lost in production and this can have an impact on application performance – including a reduction in cell viability and a loss of biocompatibility.

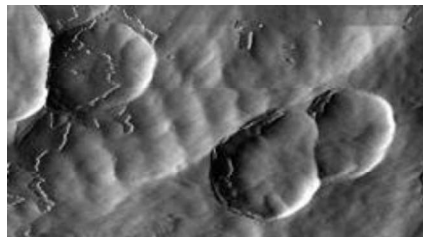
ProColl have a proprietary approach to the rapid production of quality assured, acid-soluble collagen for a more reliable representation of the benefits of collagen.



Collagen triple helix structure



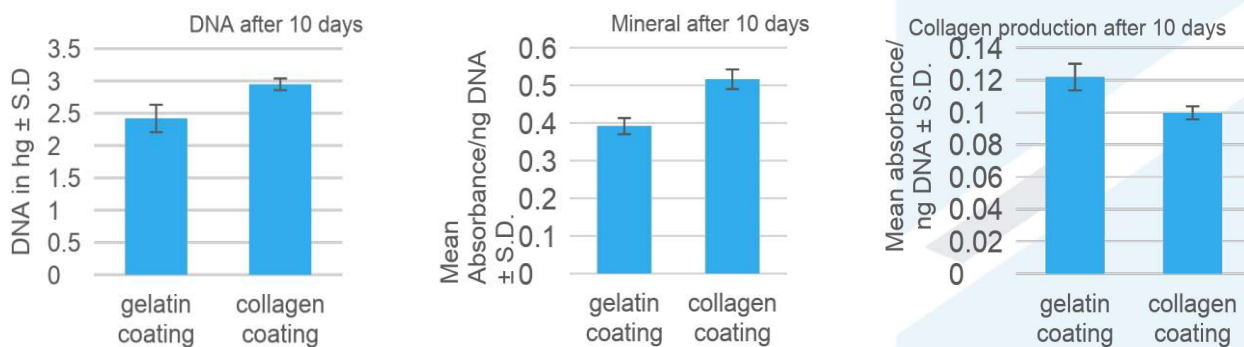
Collagen (left) collected from animal tissues, which when heated then cooled turns into gelatin (right) – essential structure is lost and each batch is different leading to reduced biocompatibility and applications.



ProColl collagen maintains its structure, including fibril formation in vitro as confirmed by AFM imaging.

Researchers at Sheffield University have demonstrated superior results in cell culture experiments using ProColl acid soluble collagen, which has consistent, reproducible biochemical properties and structure. This structure of the collagen means improved applications in tissue engineering & regenerative medicine, better cell culture health and differentiation for improved outcomes. The consistency reduces the need to re-optimize protocols, saving time and reducing cost whilst improving the quality of the produced end products.

Bone cell model MLoA5 cells were grown on either collagen or gelatin by the scientists for ten days and then assessed for differences including DNA, mineral content and collagen production using qualitative and quantitative methods.



Use of ProColl's acid soluble collagen resulted in cells which demonstrated better performance for key bone-growth markers as shown above. Calcium content and DNA were significantly higher when cultured on ProColl's collagen than on gelatin. Significantly lower collagen production is due to reduced need for the cells to produce their own collagen, thanks to the more native environment provided. These results demonstrate improved biocompatibility and better differentiation due to growth in a structured rather than denatured environment, showing the benefits of using ProColl collagen as a scaffold for tissue engineering.

If you are interested in joining our growing list of distribution and OEM partners, please use the contact form on our website (www.procoll.co.uk) and one of the team will be in touch. ProColl's collagen is also available direct for bulk orders.