

Askina® Calgitrol® Ag

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| In-vitro | | | ● | 28 |

Study of Silver Migration from Wound Dressing Materials using Porcine Serum

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Background and objective

The aim of this trial was to determine the quantity of silver ions released from the Askina® Calgitrol® Ag dressing during time by measuring the concentration obtained into porcine serum.

Method

Three batches of Askina® Calgitrol® Ag were analysed; tests were carried out in duplicate. A circular disk (3.9cm diameter) was cut from each dressing and immersed in 20ml of porcine serum under fixed conditions. At fixed time intervals the porcine serum containing the dressing was filtered;

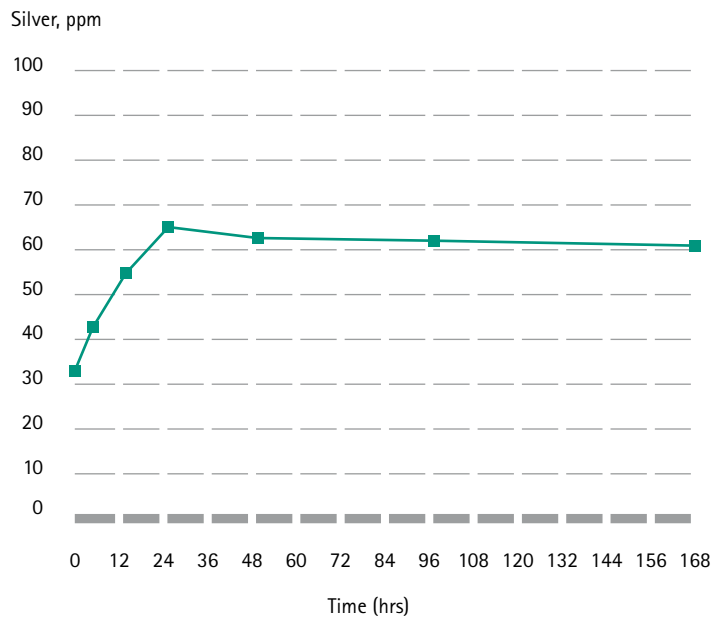
A The filtrate was analysed for silver content by ICP-OES (Inductively coupled plasma optical emission spectroscopy); this gives the percentage of silver released from Askina® Calgitrol® Ag.

B The residue of the dressing in the filter paper was completely broken down by mineral acids and analysed separately for silver content by ICP-OES; this gives the percentage of silver left in the dressing.

Results

Askina® Calgitrol® Ag releases a relatively low level of the total silver available in the dressing. Askina® Calgitrol® Ag releases silver gradually to a steady state value.

Silver ions released from Askina Calgitrol Ag (ppm)



Conclusion

Askina® Calgitrol® Ag wound dressings release silver ions through a controlled and sustained delivery. The resulting concentrations are maintained above the value of 30 – 40 ppm of silver ions, i. e. the concentration needed to obtain satisfactory antibacterial action. Askina® Calgitrol® Ag therefore ensures for sustained antimicrobial activity during a 7 day period.