

CONGO RED
Highman
04 – 210822

IVD In-vitro diagnostic medical device **CE**

CND Code: W01030799

number of tests 100
procedure time 35 minutes
product validity 2 years
storage temperature 15 - 25 °C
complementary equipment not requested

Expected aim	Product for the preparation of cyto-histological samples for optical microscopy.
Application	Method to show amyloid in tissue sections.
Principle	This is an empirical method. It is still doubtful whether the formation of the link between amyloid and dye is due to proteins or to glycans in amyloid, or even to both. On the contrary, it is certain that amyloid stained with Congo red displays a marked birefringence in polarized light. From this anisotropy it has been inferred that amyloid may have an intrinsic molecular organization which is emphasized by Congo red. According to Virchow and Puchtler, amyloid is the only component in human tissues whose histochemical characteristics can be compared to those of cellulose; therefore it has been supposed that dye and amyloid are linked by hydrogen bonds, just as it happens with the link between cellulose and Congo red.
Method	<ol style="list-style-type: none">1) Bring section to distilled water.2) Put on the section 10 drops of reagent A: leave to act 15 minutes.3) Rinse in distilled water.4) Put on the section 10 drops of reagent B: leave to act 30 seconds.5) Wash 5 minutes in running tap water.6) Put on the section 10 drops of reagent C: leave to act 2 minutes.7) Put on the section 10 drops of reagent D: leave to act 5 minutes.8) Blue in running tap water 5 minutes.9) Dehydrate through ascending alcohols, clear in xylene and mount.
Results	AmyloidBrick red, birefringent in polarized light NucleiBlue
Reagents	A) Congo red solution..... 30 ml B) Alkaline differentiation buffer 30 ml C) Phosphate buffer solution 30 ml D) Mayer's Hematoxylin..... 30 ml
Warning and precaution	The product must be used exclusively by specialized technical operators. The product is classified as hazardous. Read with attention the information written on the label (dangerous symbols, risks and safety phrases). Consult always the safety data sheet where the information about the risks of the preparation, precautionary measures during use, first aid and disposal are available. Do not use if primary packaging is damaged.
Storage	Store the preparation at room temperature. Keep the containers tightly closed.
Stability	After the first opening, the product is usable until the expiry date, if correctly stored.
Disposal	Hazardous preparation: observe all state and local environmental regulations regarding waste disposal.

References

- Benuhold H. Eine spezifische Amyloid-färbung mit Kongorot. Munchen Med Wschuschr 1922; 69: 1537-1538.
- Highman B. Improved methods for demonstrating Amyloid in paraffin sections. Arch Path 1946 ; 41: 559-562.
- Meloan SN, Puchtler H. Demonstration of Amyloid with Mesitol WLS-Congo Red: application of a textiles auxiliary to histochemistry. Histochemistry 1978; 58: 163-166.
- Sweat F, Puchtler H. Demonstration of Amyloid with direct cotton dyes. Arch. Path 1965; 80:613.
- Puchtler H, Sweat F, Levine M. On the binding of Congo Red by Amyloid . J Histochem Cytochem 1962; 10: 355-364

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