Ethanol strips for bedside monitoring of ethanol level during treatment of toxic alcohols

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Background & objectives

- Ethanol = the most commonly used antidote in toxic alcohol poisonings globally
- Recommended therapeutic S-ethanol level = 22mmol/L (100mg/dL)
- Large inter- and intra-individual variation in ethanol metabolism => serum level is recommended every 1-2 hours\(^1\), but ethanol levels are (most) often unavailable (especially in developing countries).

- We therefore wanted to develop an easy-to-use standalone bedside test based on dry chemistry. The first pre-prototype results are herewith presented.

Results

\[ y = -108.11x + 1995.8 \]
\[ R^2 = 0.9948 \]
Conclusion

• The first result from our ethanol strips looks promising for detecting ethanol accurately in the range of 30-300mg/dL (6.5-65 mmol/L).

• The clinical usefulness in the presence of high methanol concentrations has not yet been fully assessed.

• Further development is needed to address the specificity between ethanol & methanol, as well as the very high concentrations