QUANTIFYING OPIOIDS USING LIQUID CHROMATOGRAPHY AND GAS CHROMATOGRAPHY TANDEM MASS SPECTROMETRY

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OPIOIDS?

- Reduce pain
- Morphine, codeine, and heroin
- 26.4 to 36 million Americans


HEROIN

- Schedule I
- Dangers to user
- The metabolites


GAS CHROMATOGRAPHY

The Column

Carrier gas
Flow controller
Sample injector
Column
Column oven

MASS SPECTROMETRY

- Tandem
- Ionized
- Detection

Mass spectrum of morphine (Zhang et al., 2013, p. 3)


HAIR SAMPLES

- Longest detection time frame
- Decontamination
- LC/MS


URINE SAMPLES

- Routine testing
- Heroin
- Morphine
- Codeine


BLOOD SAMPLES

- Routine testing
- Stability
- LC/MS
- GC/MS


ACKNOWLEDGEMENTS

Dr. Hala Schepmann

Dr. Dee Southard
QUESTIONS?

Schlafmohnfeld (Papaver somniferum) im Erzgebirgskreis, Sachsen, Deutschland
THANK YOU

Codeine