

# Analytical Testing of Cannabis within a Business

By: Connor Graeff

# Setting up a Cannabis Lab “Business”



- ▶ Treat the lab as a business
- ▶ Build the business around the lab
- ▶ Time is your biggest cost

Sample Preparation

Sample Receiving

Microbiology

Business

Data  
Processing

Warehouse

People  
Space

Analytical Instruments



# Basic layout for the Lab

## Total Space



- ▶ “Turn Key” Business
- ▶ Movable Benches for future space
- ▶ Build for the future

# Power/Venting/Benches/Instruments



A/C Units

Prep Hoods

Benches

Power






# PerkinElmer and Emerald Scientific



- ▶ PerkinElmer supply's the instruments and SOP's
- ▶ Emerald Scientific supply's the consumptions



# Instruments

Heavy Metals / Minerals		Potency Cannabinoids	Residual Solvents, Terpenes	Pesticides Mycotoxins
ICP/MS	Sample Prep	HPLC	GC/MS Headspace	LC MS/MS (ESI - APCI)
				
NexION-2000B	TITAN	Flexar HPLC	Clarus SQ8	QSight 420

Inductively Coupled Plasmas Mass Spectrometry

# Automated Cannabis Lab “Future Lab”



## RECEIVE & WEIGH SAMPLES

Measure out representative Cannabis or Hemp sample

## SAMPLE PREPARATION

JANUS® G3 420 Workstation with ONE Pesticide<sup>420™</sup> reagent kit, vortex, centrifuge & integrated barcode scanner

## INSTRUMENT ANALYSIS

QSight® 420 LC/MSMS System - Completes the entire pesticide method

## DATA PROCESSING

Full Regulatory Compliance & Client COA Report

24 Hour Lab



# Standard Operating Procedure

- ▶ Instruments with SOP = solution
- ▶ Instruments without a SOP = project





# Top Line Revenue

- ▶ Certification of Analysis
- ▶ Average revenue per sample \$500-\$800
- ▶ 20 samples a day
- ▶ 20 samples a day X \$500 per sample X 22 days in a month = \$220,000
- ▶ 12 months in a year X \$220,000 = \$2.64 million per year

# Turn Around Time

- ▶ How fast can you get the test results to your costumers
- ▶ 24 hours, 48 hours, 74 hours



# Expenses

- ▶ Business model
- ▶ Capital Expenses “Instruments, Warehouse/Building, Company Trucks”
- ▶ Paying Employees 10-12 employees \$50,000 = \$500,000 year

# Future Business/Job Opportunity

- ▶ Start working in a cannabis lab
- ▶ Then start your own business
- ▶ Takes money to make money

# Acknowledgements

- ▶ Brad Sturgeon
- ▶ Alec Hayes
- ▶ PerkinElmer
- ▶ Emerald Scientific