



Agilent GC-MS/MS Cannabis Testing

Pesticide Analysis in Cannabis

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Pesticide Analysis by GC-MS/MS

To summarize:

“The Oregon limits in the Table of Action levels are not thresholds; they are a best guess at the analytical LOQ for that analyte.

These limits are analytical in nature only and will probably be revised when Oregon has enough data to be sure the labs can achieve lower limits”.

Pesticide Analysis by GC-MS/MS

Customer results from the 7000 GC-MS/MS:

- Private lab in Oregon kindly provided early results
- 1g sample in 10 mL acetonitrile; 10x dilution = 100 fold total dilution
- Pesticides included in the GC-MS/MS analysis are highlighted in the following Table

Pesticide Analysis by GC-MS/MS

Table 1: Pesticide analytes and their action levels in OR (excerpt)

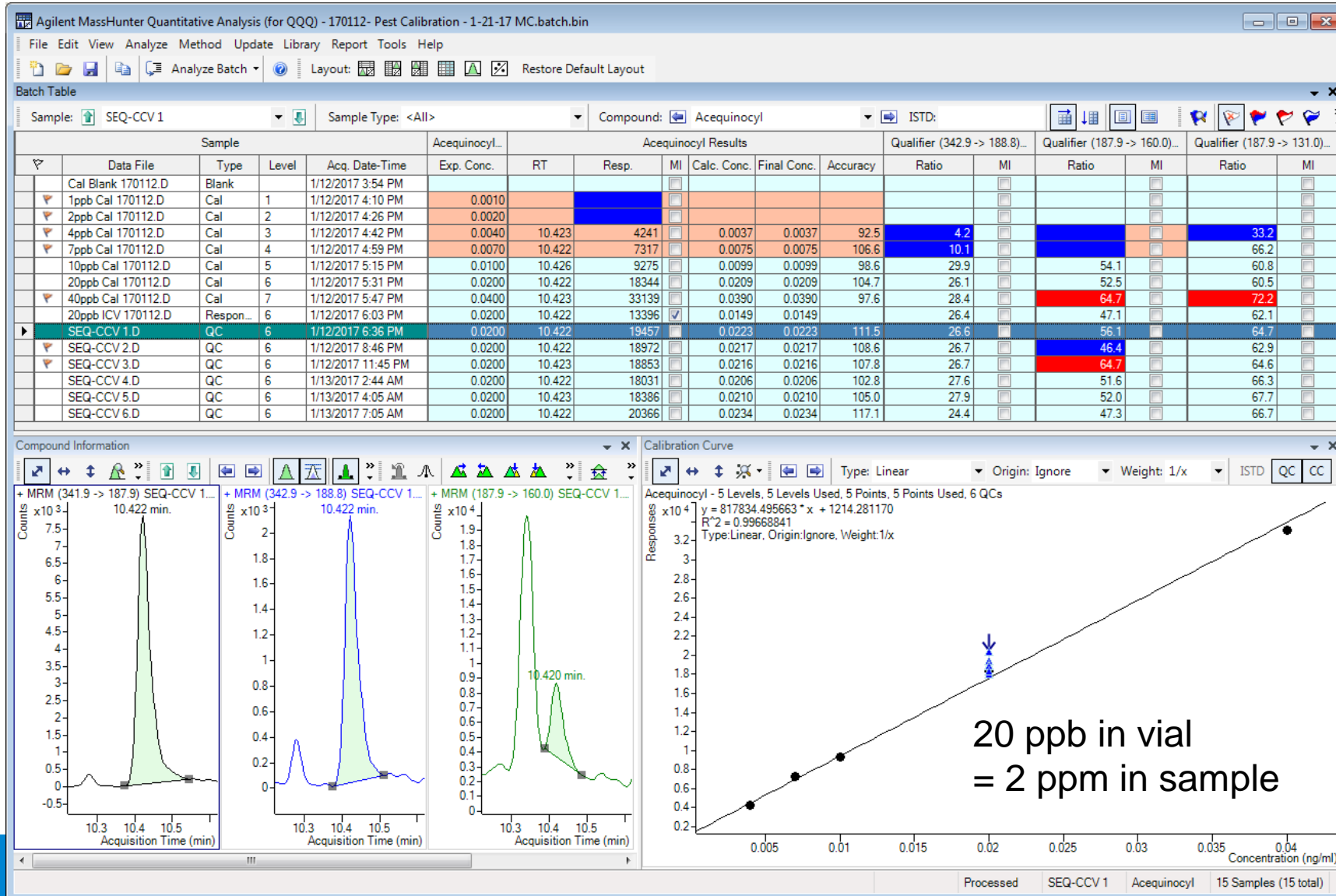
Analyte	Chemical Abstract Services (CAS) Registry Number	Action Level ppm
Abamectin	71751-41-2	0.5
Acephate	30560-19-1	0.4
Acequinocyl	57960-19-7	2
Acetamiprid	135410-20-7	0.2
Aldicarb	116-06-3	0.4
Azoxystrobin	131860-33-8	0.2
Bifenazate	149877-41-8	0.2
Bifenthrin	82657-04-3	0.2
Boscalid	188425-85-6	0.4
Carbaryl	63-25-2	0.2
Carbofuran	1563-66-2	0.2
Chlorantraniliprole	500008-45-7	0.2
Chlorfenapyr	122453-73-0	1
Chlorpyrifos	2921-88-2	0.2
Clofentezine	74115-24-5	0.2
Cyfluthrin	68359-37-5	1
Cypermethrin	52315-07-8	1
Daminozide	1596-84-5	1
DDVP (Dichlorvos)	62-73-7	0.1

Highest

Lowest

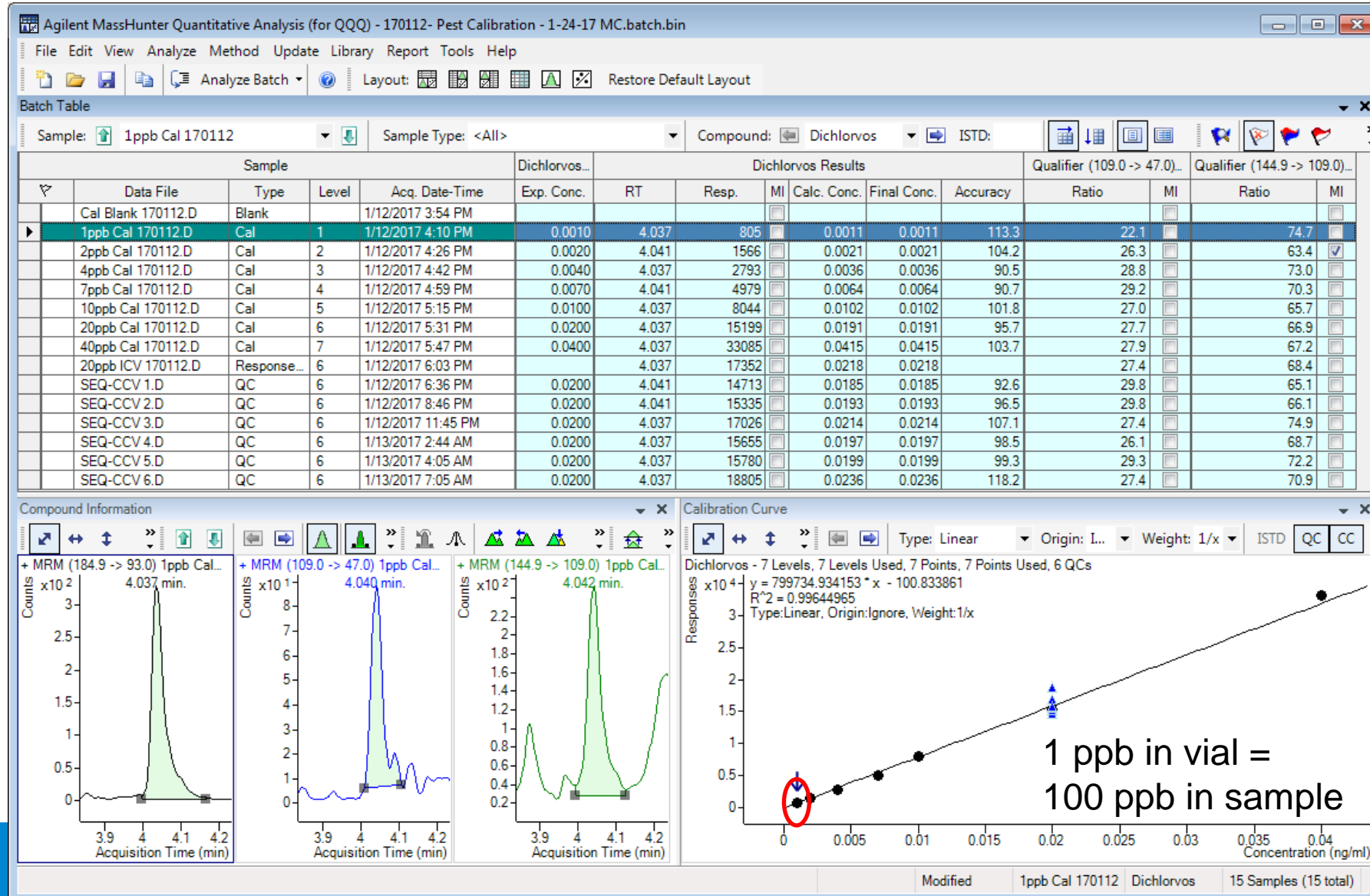
Pesticide Analysis by GC-MS/MS

Calibrators and QCs for Acequinocyl (Action Level 2 ppm in OR)



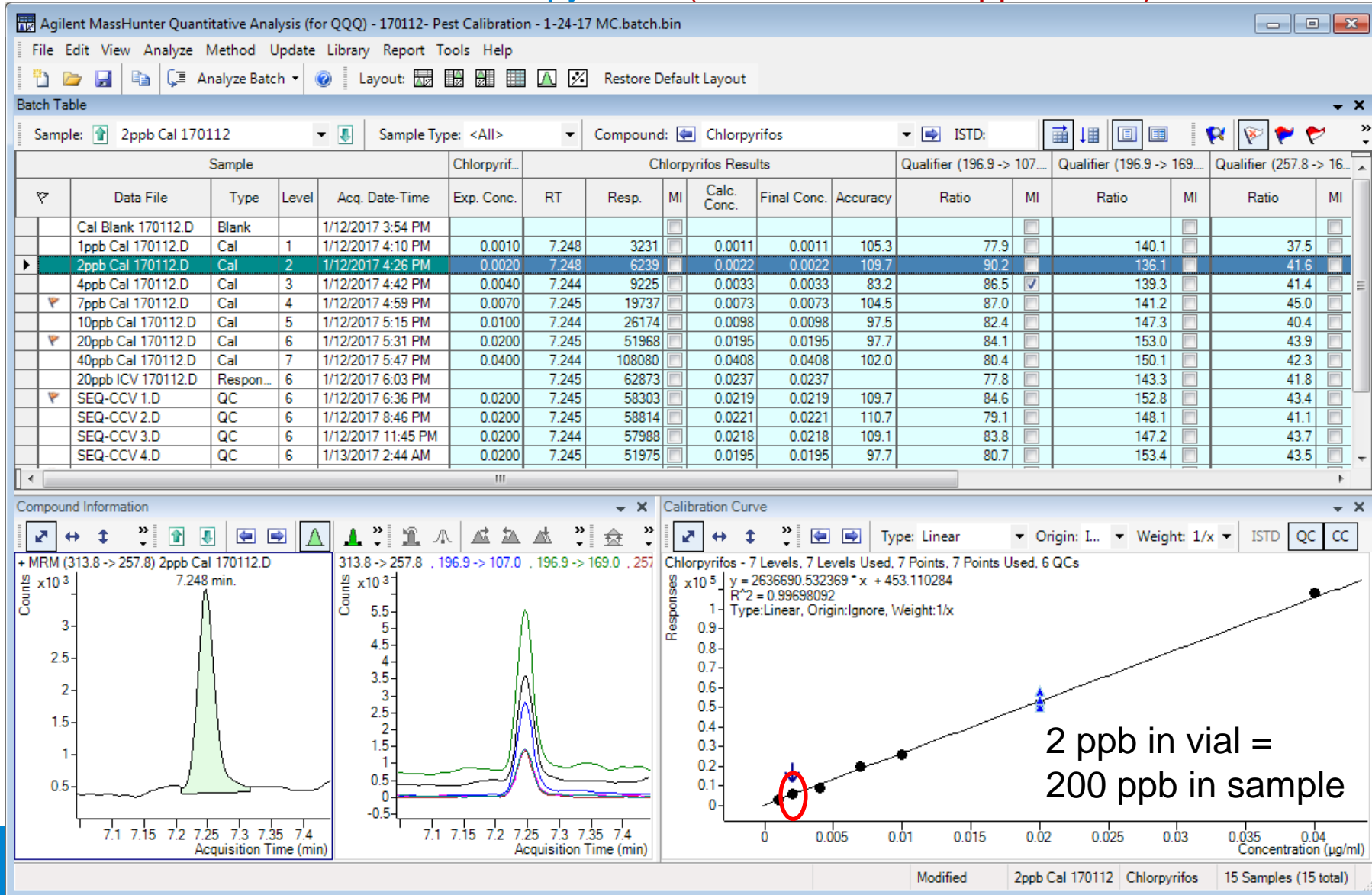
Pesticide Analysis by GC-MS/MS

Calibrators and QCs for Dichlorvos (Action Level 100 ppb in OR)



Pesticide Analysis by GC-MS/MS

Calibrators and QCs for Chlorpyrifos (Action Level 200 ppb in OR)



Pesticide Analysis by GC-MS/MS

%RSD (n=6) for 14 GCMS-amenable pesticides

Pesticide (GCMS)	%RSD (20 ppb in vial)	Action Level (ppb) Oregon
Dichlorvos	8.0	100
Naled	12.5	500
Parathion-methyl	6.2	200
Chlorpyrifos	6.7	200
MGK-264	4.9	200
Fipronil	4.9	400
Fludioxonil	6.6	400
Kresoxim-methyl	4.5	400
Chlorfenapyr	6.2	1000
Propiconazole	3.9	400
Bifenthrin	2.9	200
Acequinocyl	4.6	2000
Cyfluthrin	5.2	1000
Cypermethrin	4.0	1000

← Lowest AL

← Highest AL

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Reference Guide for GC-MS/MS Pesticide Residue Analysis



Reference Guide

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