Application Report 308

Analysis of US EPA Method 632 Carbamate and Urea Pesticides Using Ascentis™ C18

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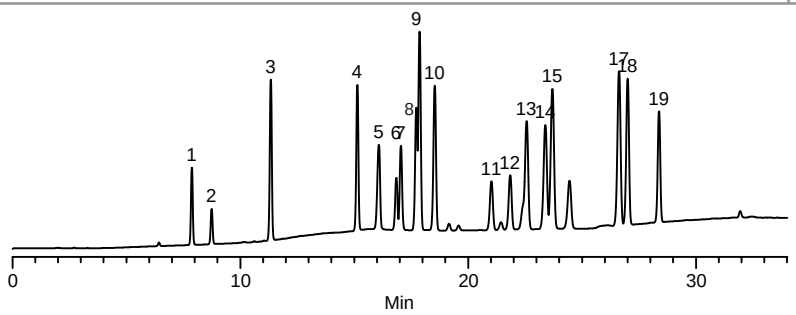
Acquisition System: "Pikes Peak" (Thermo Instrument)

Notebook Reference: 1562-72

US EPA Method 632 specifies a procedure for the determination of carbamate and urea pesticides in municipal and industrial wastewaters. The suitability of the Ascentis C18 for the separation of the nineteen analytes specified in the method is demonstrated. The structures along with the optimized chromatogram obtained on the Ascentis C18 are presented.

Key Words

aminocarb, 45322, 2032-59-9, barban, 33390, 101-27-9, carbaryl, 45367, 63-25-2, carbofuran, 45370, 1563-66-2, chlorpropham, 45393, 101-21-3, diuron, 45463, 330-54-1, fenuron, 45494, 101-42-8, fluomethuron, 45502, 2164-17-2, linuron, 36141, 330-55-2, methiocarb, 36152, 2032-65-7, methomyl, 36159, 16752-77-5, mexacarbate, 315-18-4, monuron, 36174, 150-68-5, neburon, 36176, 555-37-3, oxamyl, 36184, 23135-22-0, propham, 45641, 122-42-9, propoxur, 45644, 114-26-1, siduron, 34373, 1982-49-6, swep, 45666, 1918-18-9, carbamate and urea pesticide, US EPA Method 632, Ascentis C18, 581325-U



G003194

Conditions

column: Ascentis C18, 25 cm x 4.6 mm I.D., 5 µm particles (581325-U)
mobile phase A: DI water
mobile phase B: acetonitrile
flow rate: 1.0 mL/min.
temp: 30 °C
det: UV at 210 nm
injection: 10 µL
sample: as indicated in 16% acetonitrile in DI water
gradient:

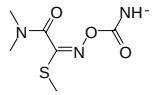
Min	%A	%B
0	90	10
13	50	50
23	40	60
29	10	90
34	10	90

Peak IDs

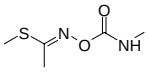
1. Oxamyl (10 µg/mL)
2. Methomyl (10 µg/mL)
3. Fenuron (10 µg/mL)
4. Monuron (10 µg/mL)
5. Aminocarb (10 µg/mL)
6. Propoxur (10 µg/mL)
7. Carbofuran (10 µg/mL)
8. Fluomethuron (10 µg/mL)
9. Carbaryl (10 µg/mL)
10. Diuron (10 µg/mL)
11. Propham (10 µg/mL)
12. Siduron (10 µg/mL)
13. Methiocarb (10 µg/mL)
14. Linuron (10 µg/mL)
15. Swep (10 µg/mL)
16. Mexacarbate (10 µg/mL)
17. Chlorpropham (10 µg/mL)
18. Barban (10 µg/mL)
19. Neburon (10 µg/mL)

Structures

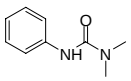
Oxamyl - G003189



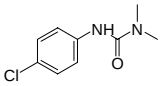
Methomyl - G003186



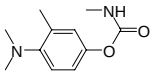
Fenuron - G002858



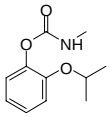
Monuron - G002857



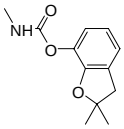
Aminocarb - G003181



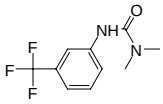
Propoxur - G003191



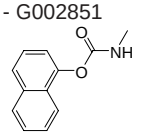
Carbofuran - G002866



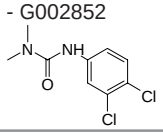
Fluomethuron - G003184



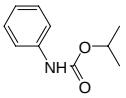
Carbaryl - G002851



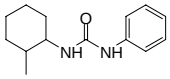
Diuron - G002852



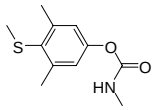
Propham - G003190



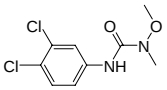
Siduron - G003192



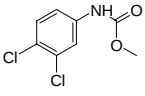
Methiocarb - G003185



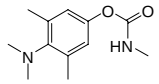
Linuron - G002856



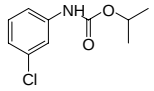
Swep - G003193



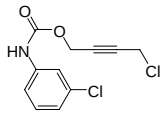
Mexacarbate - G003187



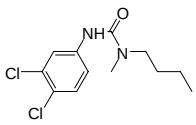
Chlorpropham - G003183



Barban - G003182



Neburon - G003188



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