Preparation of DNA Standard

Weight: 26.6 mg
Vol.: 25 ml water
Conc.: 1.06 mg/ml

I have not quant. this solution spectrophotometrically yet.

10-23-75 DNA

10-23-75 Lyophilization of DNA Samples

- Transfer 100 µl of 10-21-75 into 75 vials via syringe.
- Freeze
- Lyophilize overnight.

10-24-75

Samples:
- 10-23-1
- 2
- 3
- 4

to be hydrolyzed at approx 50, 60, 80, 100°C

They looked like small inverted cones of DNA after lyophi.

DNA

Store in freezer

10-25-75 Remove from freezer and let them come to room T.
10-25-75  Formic Acid Hydrolysis of DNA

Sample 10-23-1 (106 µg DNA)
- Add 0.20 ml HCOOH
- Heat at 54°C in oil bath for one hour
- Evaporate HCOOH away with gentle stream of helium

Observation: There was a white precipitate residue after 30 min of evaporation — good.

Sample 10-23-2 (106 µg DNA)
- Add 0.20 ml HCOOH
- Heat at 64°C (finally 69°C) for 60 min
- Evaporate acid
- Add 0.5 ml buffer

Sample 10-23-3 (106 µg DNA)
- Add 0.20 ml HCOOH
- Let stand at room T for one hour
- Remove acid
- Add 0.5 ml buffer

Sample 10-23-4 (106 µg DNA)
- Add 0.20 ml HCOOH
- Heat to 100-105°C for 1 hr
- Remove acid
- Add 0.5 ml buffer

10-25-75  Chromatographic Conditions:

0.1 M AF pH 5.38, T = 55, S = 20, P = 800/600
Col = 25 x 0.22 DC1A (Old)
Release of bases from DNA after hydrolysis in 0.2 ml HCOOH for 60 min.
10-25-75  Formic Acid Hydrolysis - Results

Things went extremely well. The analysis conditions permitted 15 minute UVCA analysis - good sensitivity and sharp peaks.

Data:

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<thead>
<tr>
<th>Date</th>
<th>X1.0</th>
<th>X0.4</th>
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<tbody>
<tr>
<td>7-23-1 (54°C)</td>
<td>152</td>
<td>92</td>
<td>135</td>
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<td></td>
<td>(130%)</td>
<td>(77%)</td>
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<td>7-23-2 (64°C)</td>
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<td>110</td>
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<tr>
<td></td>
<td>(115%)</td>
<td>(92%)</td>
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<td>7-23-3 (23°C)</td>
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<td></td>
<td>(47%)</td>
<td>(66%)</td>
<td>(66%)</td>
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<tr>
<td>7-23-4 (100-105°C)</td>
<td>117</td>
<td>119</td>
<td>167</td>
<td>5</td>
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