Patient report

Bio-Rad          DATE: 08/07/2008
D-10             TIME: 02:32 PM
S/N: #DB7G153204 Software version: 3.50-A1
Sample ID:       RACK01-9-19-24-7-2008
Injection date   07/24/2008 04:53 PM
Injection #: 19  Method: HbA2/F
Rack #: 01        Rack position: 9

Peak table - ID: RACK01-9-19-24-7-2008

<table>
<thead>
<tr>
<th>Peak</th>
<th>R.time</th>
<th>Height</th>
<th>Area</th>
<th>Area %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1a</td>
<td>0.22</td>
<td>5948</td>
<td>39765</td>
<td>2.5</td>
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<td>57674</td>
<td>3.6</td>
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<td>A1c</td>
<td>0.74</td>
<td>7595</td>
<td>73702</td>
<td>6.2</td>
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<td>P3</td>
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<td>64128</td>
<td>723676</td>
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<td>A0</td>
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<td>157112</td>
<td>665509</td>
<td>41.7</td>
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<td>A2</td>
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<td>2013</td>
<td>35507</td>
<td>2.6</td>
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</table>

Total Area: 1595833

Concentration:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>% A1c</td>
<td>6.2</td>
</tr>
<tr>
<td>% A2</td>
<td>2.6</td>
</tr>
</tbody>
</table>
The chromatogram and data in this case report are actual laboratory findings. Bio-Rad Laboratories, Inc. does not validate or confirm the sample data included in this database. All information contained herein is for informational use only and is not meant as a definitive identification of hemoglobin genotype.

Hb Name: Santa Clara

Genotype: Beta 97(F 99) His --> Asn

Hematology:
Hb (g/dL): 16.1
RBC (M/ml): 5.44
MCV (fL): 84
MCH (pg): 29.6
Morphology: ancytosis, microcytosis

Iron Status:
Ferritin: 20
Transferrin saturation: 244

Clinical Findings: polycythemia
Electrophoresis: does not separate

Patient Data
Ethnicity: Central Italy
Gender: Female
Age of patient: 43
Transfused patient: NO

References: Bioquimica et Biophysica (2007)
Dr Antonio Amato
Associazione Nazionale per la Lotta contro le Microcitemie in Italia (ANMI-Onlus)
Centro Studi Microcitemie di Roma
Rome, Italy

Bio-rad Comments:
Hb Santa Clara beta 97(FG4) His>Asn is an increased oxygen affinity variant. It has been described once in a Mexican child presenting with a moderate erythrocytosis.