

Retrograde Alcohol Extrapolation Report

Organization: BAC Tracker International, Inc.
Reference ID# 2011-BAC-0001

Report Generated 9/21/2011

Subject Information

| | |
|------------------------|-------------------------|
| Name: Doe, John | Weight (lb): 183 |
| Age: 29 | Height (in): 72 |
| Gender: Male | |

Drink Consumption Information

| Time of Interest (24hrs) | BAC (g/dl) | Range (+/-) |
|--------------------------|------------|-------------|
| 2200 | 0.091 | 0.014 |

| <u>Elimination Range (g/dl/hr)</u> | | |
|------------------------------------|------------|-------|
| Low Range | High Range | Avg. |
| 0.010 | 0.025 | 0.018 |

Total Volume of Alcohol Consumed (100% alc/vol)

| <u>Formula</u> | <u>Volume</u> | <u>+/-</u> |
|----------------|---------------|------------|
| Pos.-Moz. | 4.391 | 1.142 |
| Watson | 4.149 | 1.079 |
| Seidl | 4.696 | 1.221 |
| Widmark | 4.185 | 1.089 |
| Forrest | 4.412 | 1.148 |
| Ulrich | 4.516 | 1.175 |

Standard Drink Information

| <u>Formula</u> | <u>Standard Drinks</u> | <u>+/-</u> |
|----------------|------------------------|------------|
| Pos.-Moz. | 7.318 | 1.903 |
| Watson | 6.916 | 1.799 |
| Seidl | 7.826 | 2.036 |
| Widmark | 6.975 | 1.814 |
| Forrest | 7.353 | 1.913 |
| Ulrich | 7.527 | 1.958 |

Volume Distribution Loading Factor

| | | |
|------------|--------------|--------------|
| Widmark: | 0.680 | 0.194 |
| Watson: | 0.674 | 0.196 |
| Forrest: | 0.717 | 0.184 |
| Seidl: | 0.763 | 0.173 |
| Ulrich: | 0.734 | 0.180 |
| Pos.-Moz.: | 0.713 | 0.185 |

Peak Alcohol Concentration

| | |
|------------------|-------|
| Peak BAC (g/dl): | 0.107 |
| Range: | 0.036 |
| Peak Time(24hr): | 2030 |
| Loading Factor | 0.184 |

Known Case Data Information

| | |
|------------------------------|-------|
| Time of First Drink (24hrs): | 1730 |
| Time of Last Drink (24hrs): | 1950 |
| Time of Known BAC (24hrs): | 2330 |
| Known BAC (g/dl): | 0.068 |

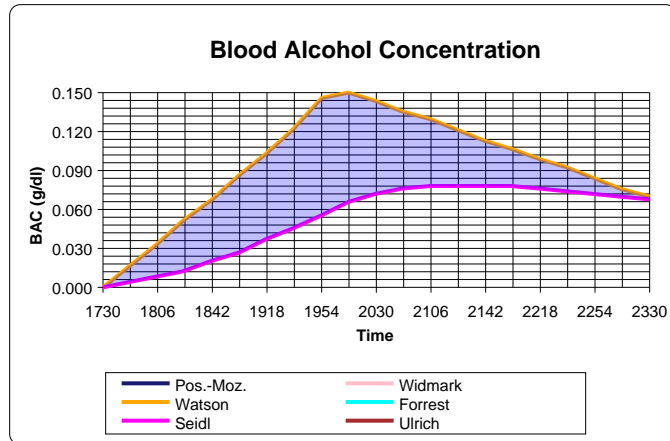
One drink is equivalent to 0.6 oz of ethanol (100% alc/vol)

BAC (g/dl) at Time of Interest: 0.091

Male

| <u>Time (24 hr)</u> | <u>BAC (g/dl)</u> | <u>+/-</u> |
|---------------------|-------------------|------------|
| 1730 | 0.000 | +/- 0.000 |
| 1748 | 0.009 | +/- 0.006 |
| 1806 | 0.019 | +/- 0.013 |
| 1824 | 0.031 | +/- 0.019 |
| 1842 | 0.043 | +/- 0.024 |
| 1900 | 0.056 | +/- 0.029 |
| 1918 | 0.069 | +/- 0.033 |
| 1936 | 0.082 | +/- 0.038 |
| 1954 | 0.099 | +/- 0.045 |
| 2012 | 0.106 | +/- 0.043 |
| 2030 | 0.107 | +/- 0.036 |
| 2048 | 0.105 | +/- 0.030 |
| 2106 | 0.102 | +/- 0.025 |
| 2124 | 0.099 | +/- 0.021 |
| 2142 | 0.095 | +/- 0.018 |
| 2200 | 0.091 | +/- 0.014 |
| 2218 | 0.087 | +/- 0.011 |
| 2236 | 0.082 | +/- 0.008 |
| 2254 | 0.077 | +/- 0.006 |
| 2312 | 0.072 | +/- 0.003 |
| 2330 | 0.067 | +/- 0.001 |

Extrapolation Information



Absorption Rate Constant "k" (Uemura et al 2005)

Slow Absorption Rate

1.0

Fast Absorption Rate

8.0

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| <u>BAC at Time of Interest:</u> 0.091 | | <u>BAC at Time of Interest:</u> 0.091 | | <u>BAC at Time of Interest:</u> 0.091 | |
|--|---------------------------------------|--|---------------------------------------|--|---------------------------------------|
| <u>Pos.-Moz.</u> <u>Male</u> | <u>Doe, John</u> <u>BAC (g/dl)</u> | <u>Watson</u> <u>Male</u> | <u>Doe, John</u> <u>BAC (g/dl)</u> | <u>Seidl</u> <u>Male</u> | <u>Doe, John</u> <u>BAC (g/dl)</u> |
| <u>Time (24 hr)</u> | | <u>Time (24 hr)</u> | | <u>Time (24 hr)</u> | |
| 1730 | 0.000 | 1730 | 0.000 | 1730 | 0.000 |
| 1748 | 0.010 | 1748 | 0.009 | 1748 | 0.010 |
| 1806 | 0.021 | 1806 | 0.019 | 1806 | 0.022 |
| 1824 | 0.033 | 1824 | 0.031 | 1824 | 0.034 |
| 1842 | 0.046 | 1842 | 0.043 | 1842 | 0.046 |
| 1900 | 0.059 | 1900 | 0.056 | 1900 | 0.058 |
| 1918 | 0.072 | 1918 | 0.069 | 1918 | 0.070 |
| 1936 | 0.085 | 1936 | 0.082 | 1936 | 0.083 |
| 1954 | 0.100 | 1954 | 0.099 | 1954 | 0.099 |
| 2012 | 0.107 | 2012 | 0.106 | 2012 | 0.107 |
| 2030 | 0.107 | 2030 | 0.107 | 2030 | 0.107 |
| 2048 | 0.105 | 2048 | 0.105 | 2048 | 0.105 |
| 2106 | 0.103 | 2106 | 0.102 | 2106 | 0.103 |
| 2124 | 0.099 | 2124 | 0.099 | 2124 | 0.099 |
| 2142 | 0.095 | 2142 | 0.095 | 2142 | 0.095 |
| 2200 | 0.091 | 2200 | 0.091 | 2200 | 0.091 |
| 2218 | 0.087 | 2218 | 0.087 | 2218 | 0.087 |
| 2236 | 0.082 | 2236 | 0.082 | 2236 | 0.082 |
| 2254 | 0.077 | 2254 | 0.077 | 2254 | 0.077 |
| 2312 | 0.072 | 2312 | 0.072 | 2312 | 0.072 |
| 2330 | 0.067 | 2330 | 0.067 | 2330 | 0.067 |

| <u>BAC at Time of Interest:</u> 0.091 | | <u>BAC at Time of Interest:</u> 0.091 | | <u>BAC at Time of Interest:</u> 0.091 | |
|--|---------------------------------------|--|---------------------------------------|--|---------------------------------------|
| <u>Widmark</u> <u>Male</u> | <u>Doe, John</u> <u>BAC (g/dl)</u> | <u>Forrest</u> <u>Male</u> | <u>Doe, John</u> <u>BAC (g/dl)</u> | <u>Ulrich</u> <u>Male</u> | <u>Doe, John</u> <u>BAC (g/dl)</u> |
| <u>Time (24 hr)</u> | | <u>Time (24 hr)</u> | | <u>Time (24 hr)</u> | |
| 1730 | 0.000 | 1730 | 0.000 | 1730 | 0.000 |
| 1748 | 0.009 | 1748 | 0.010 | 1748 | 0.011 |
| 1806 | 0.019 | 1806 | 0.021 | 1806 | 0.021 |
| 1824 | 0.031 | 1824 | 0.033 | 1824 | 0.034 |
| 1842 | 0.043 | 1842 | 0.046 | 1842 | 0.046 |
| 1900 | 0.056 | 1900 | 0.058 | 1900 | 0.059 |
| 1918 | 0.068 | 1918 | 0.072 | 1918 | 0.072 |
| 1936 | 0.081 | 1936 | 0.084 | 1936 | 0.085 |
| 1954 | 0.099 | 1954 | 0.100 | 1954 | 0.100 |
| 2012 | 0.107 | 2012 | 0.107 | 2012 | 0.107 |
| 2030 | 0.107 | 2030 | 0.107 | 2030 | 0.107 |
| 2048 | 0.105 | 2048 | 0.105 | 2048 | 0.105 |
| 2106 | 0.102 | 2106 | 0.103 | 2106 | 0.103 |
| 2124 | 0.099 | 2124 | 0.099 | 2124 | 0.099 |
| 2142 | 0.095 | 2142 | 0.095 | 2142 | 0.095 |
| 2200 | 0.091 | 2200 | 0.091 | 2200 | 0.091 |
| 2218 | 0.087 | 2218 | 0.087 | 2218 | 0.087 |
| 2236 | 0.082 | 2236 | 0.082 | 2236 | 0.082 |
| 2254 | 0.077 | 2254 | 0.077 | 2254 | 0.077 |
| 2312 | 0.072 | 2312 | 0.072 | 2312 | 0.072 |
| 2330 | 0.067 | 2330 | 0.067 | 2330 | 0.067 |

The above results represent estimations of blood alcohol concentration using empirically derived, peer reviewed, published formulae. The accuracy of these estimations is contingent upon the information provided.

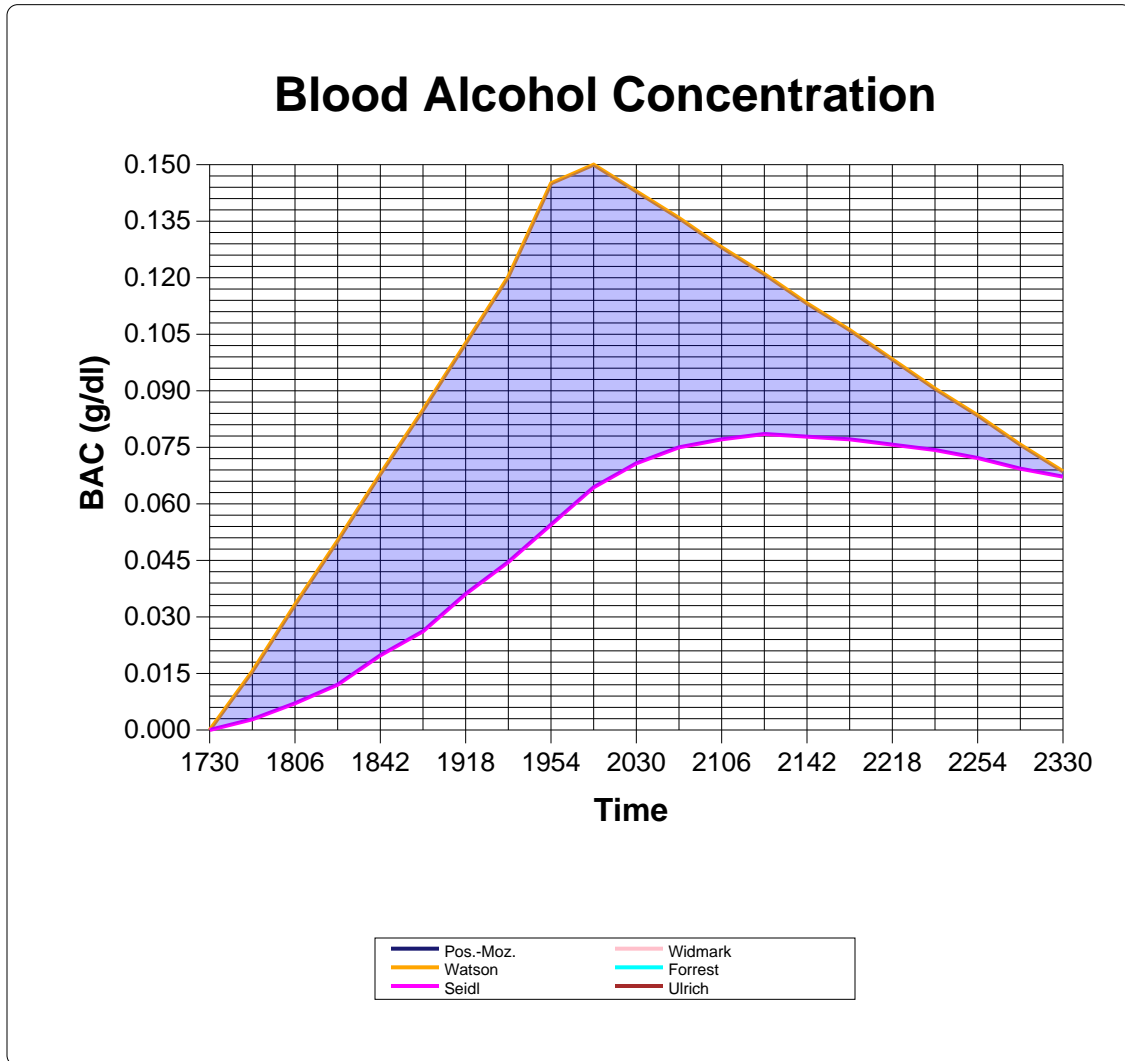
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Chart Generated

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