

**Antibiotic Residues in Honey from U.E.**  
Bremen Laboratory

**Two years**

|                  | 1999 [%] | 2000 [%] |
|------------------|----------|----------|
| Streptomycin     | 43,2     | 26       |
| Sulfathiazol     | 28,8     | 16,2     |
| Sulfamethazin    | 11,4     | 6,7      |
| Oxytetracyclin   | 11,4     | 5,6      |
| Tetracyclin      | 12,7     | 7,7      |
| Chlortetracyclin | 5,5      | 0,7      |

**Chlortetracyclin in mg/kg**

| Year | Gesamt | n.n.   | <=0,01 | <=0,1 | <=0,2 | >0,2  |
|------|--------|--------|--------|-------|-------|-------|
| 1999 | 623    | 589    | 3      | 27    | 1     | 3     |
| %    | 100%   | 94,50% | 0,50%  | 4,30% | 0,20% | 0,50% |
| Year | Gesamt | n.n.   | <=0,01 | <=0,1 | <=0,2 | >0,2  |
| 2000 | 1438   | 1428   | 5      | 7     | 0     | 0     |
| %    | 100    | 99,3   | 0,3    | 0,4   | -     | -     |

**Oxytetracyclin in mg/kg**

| Year | Total | n.n.   | <=0,01 | <=0,1 | <=0,2 | >0,2  |
|------|-------|--------|--------|-------|-------|-------|
| 1999 | 623   | 552    | 9      | 59    | 2     | 1     |
| %    | 100%  | 88,60% | 1,40%  | 9,50% | 0,30% | 0,20% |
| Year | Total | n.n.   | <=0,01 | <=0,1 | <=0,2 | >0,2  |
| 2000 | 1438  | 1385   | 19     | 30    | 2     | 2     |
| %    | 100   | 96,4   | 1,3    | 2,1   | 0,1   | 0,1   |

### *Tetracyclin in mg/kg*

| Year | Total | n.d.   | <=0,01 | <=0,1 | <=0,2 | >0,2  |
|------|-------|--------|--------|-------|-------|-------|
| 1999 | 623   | 544    | 16     | 61    | 2     | 0     |
| %    | 100%  | 87,30% | 2,60%  | 9,80% | 0,30% | 0,00% |
| Year | Total | n.d.   | <=0,01 | <=0,1 | <=0,2 | >0,2  |
| 2000 | 1438  | 1328   | 25     | 72    | 7     | 6     |
| %    | 100   | 92,3   | 1,7    | 5     | 0,5   | 0,5   |

### *Sulfathiazol in mg/kg*

| Year | Total | n.d.   | <=0,01 | <=0,1  | <=0,2 | >0,2  |
|------|-------|--------|--------|--------|-------|-------|
| 1999 | 2.104 | 1.499  | 91     | 359    | 67    | 88    |
| %    | 100%  | 71,20% | 4,30%  | 17,10% | 3,20% | 4,20% |
| Year | Total | n.d.   | <=0,01 | <=0,1  | <=0,2 | >0,2  |
| 2000 | 2777  | 2325   | 48     | 295    | 54    | 55    |
| %    | 100   | 83,8   | 1,7    | 10,6   | 1,9   | 2     |

### *Sulfamethazin in mg/kg*

| Year | Total | n.d.   | <=0,01 | <=0,1 | <=0,2 | >0,2  |
|------|-------|--------|--------|-------|-------|-------|
| 1999 | 2.103 | 1.863  | 41     | 170   | 19    | 10    |
| %    | 100%  | 88,60% | 1,90%  | 8,10% | 0,90% | 0,50% |
| Year | Total | n.d.   | <=0,01 | <=0,1 | <=0,2 | >0,2  |
| 2000 | 2777  | 2591   | 28     | 111   | 19    | 28    |
| %    | 100   | 93,3   | 1      | 4     | 0,7   | 1     |

### Streptomycin in mg/kg

| Year | Total | n.d    | <0,02  | <0,1   | <0,2  | >0,2  |
|------|-------|--------|--------|--------|-------|-------|
| 1999 | 1.966 | 1.117  | 295    | 421    | 78    | 55    |
| %    | 100%  | 56,80% | 15,00% | 21,40% | 4,00% | 3,80% |
| Year | Total | n.d    | <0,02  | <0,1   | <0,2  | >0,2  |
| 2000 | 1991  | 1473   | 216    | 212    | 23    | 66    |
| %    | 100   | 74     | 10,9   | 10,6   | 1,2   | 3,3   |

### Antibiotic in EU - Honey 1999

| Origin  | Sample number | positive | [%]  |
|---------|---------------|----------|------|
| Italy   | 26            | 7        | 27   |
| Spain   | 29            | 28       | 97   |
| Germany | 22            | 6        | 27   |
| France  | 8             | 4        | 50   |
| England | 2             | 1        | 50   |
| Austria | 2             | -        | 0    |
| Denmark | 4             | 2        | 50   |
| Sweden  | 2             | -        | 0    |
| Finland | 3             | -        | 0    |
| Swiss   | 2             | -        | 0    |
| Belgium | 2             | -        | 0    |
| Greece  | 6             | -        | 0    |
| Sum     | 108           |          |      |
| in %    | 100           | 48       | 44,4 |

Positive means  $\geq 0,01$  mg/kg  
Origin as labelled by the sender

## Survey: Antibiotic residues in European Honey 1999

|                | Sample number | Streptomycines | Sulfonamides | Tetracyclines |           | positive  | negative  |
|----------------|---------------|----------------|--------------|---------------|-----------|-----------|-----------|
|                |               | positive       | negative     | positive      | negative  |           |           |
| <b>Italy</b>   | <b>26</b>     | <b>1</b>       | <b>25</b>    | <b>2</b>      | <b>24</b> | <b>4</b>  | <b>22</b> |
| <b>Spain</b>   | <b>29</b>     | <b>1</b>       | <b>28</b>    | <b>21</b>     | <b>8</b>  | <b>6</b>  | <b>23</b> |
| <b>Germany</b> | <b>22</b>     | <b>1</b>       | <b>21</b>    | <b>3</b>      | <b>19</b> | <b>2</b>  | <b>20</b> |
| <b>France</b>  | <b>8</b>      | <b>-</b>       | <b>8</b>     | <b>2</b>      | <b>6</b>  | <b>2</b>  | <b>6</b>  |
| <b>England</b> | <b>2</b>      | <b>-</b>       | <b>2</b>     | <b>1</b>      | <b>1</b>  | <b>-</b>  | <b>2</b>  |
| <b>Austria</b> | <b>2</b>      | <b>-</b>       | <b>2</b>     | <b>-</b>      | <b>2</b>  | <b>-</b>  | <b>2</b>  |
| <b>Denmark</b> | <b>4</b>      | <b>1</b>       | <b>3</b>     | <b>-</b>      | <b>4</b>  | <b>1</b>  | <b>3</b>  |
| <b>Sweden</b>  | <b>2</b>      | <b>-</b>       | <b>2</b>     | <b>-</b>      | <b>2</b>  | <b>-</b>  | <b>2</b>  |
| <b>Finland</b> | <b>3</b>      | <b>-</b>       | <b>3</b>     | <b>-</b>      | <b>3</b>  | <b>-</b>  | <b>3</b>  |
| <b>Swiss</b>   | <b>2</b>      | <b>-</b>       | <b>2</b>     | <b>-</b>      | <b>2</b>  | <b>-</b>  | <b>2</b>  |
| <b>Belgium</b> | <b>2</b>      | <b>-</b>       | <b>2</b>     | <b>-</b>      | <b>2</b>  | <b>-</b>  | <b>2</b>  |
| <b>Greece</b>  | <b>6</b>      | <b>-</b>       | <b>6</b>     | <b>-</b>      | <b>6</b>  | <b>-</b>  | <b>6</b>  |
| <b>Sum</b>     | <b>108</b>    | <b>4</b>       | <b>104</b>   | <b>29</b>     | <b>79</b> | <b>15</b> | <b>93</b> |
| <b>in %</b>    | <b>100</b>    | <b>4</b>       | <b>96</b>    | <b>27</b>     | <b>73</b> | <b>14</b> | <b>86</b> |

Positive means  $\geq 0,01$  mg/kg  
Origin as labelled by the send