

**PCR-/NAT *F. tularensis* & *Brucella***  
**(RV 543) November 2024**



**Tabelle 1: Probenzusammensetzung und erwartetes Ergebnis.**  
*Sample composition and expected results.*

| Proben Nr.     | Erwartet / expected | Probenzusammensetzung / Sample composition  |
|----------------|---------------------|---|
| 543A 241015 01 | ++ / ++             | <i>Francisella tularensis subsp. holarctica</i> (~ 1x10 <sup>4</sup> CFU/mL)<br><i>Brucella melitensis</i> (~ 1x10 <sup>4</sup> CFU/mL) |
| 543A 241015 02 | ∅ / ∅               | <i>Escherichia coli</i> K12   |
| 543A 241015 03 | ∅ / ++              | <i>Brucella melitensis</i> (~ 2x10 <sup>4</sup> CFU/mL)   |
| 543A 241015 04 | ++ / ∅              | <i>Francisella tularensis subsp. holarctica</i> (~ 5x10 <sup>4</sup> CFU/mL)  |

**Tabelle 2: Häufigkeit der Mitteilung verschiedener Befunde. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Francisella tularensis* dargestellt.**  
*Absolute numbers of reported individual results.*  
**Note: only the *F. tularensis*-specific results are depicted in this table**

| n = 27                                 | Proben Nr. (Sample no.) |    |    |    |                   | Inhibition |    |    |    |
|--|-------------------------|----|----|----|-------------------|------------|----|----|----|
|  | 01                      | 02 | 03 | 04 |                   | 01         | 02 | 03 | 04 |
| <b>Befund</b><br><i>Result</i>         |                         |    |    |    |                   |            |    |    |    |
| <b>Positiv</b>                         | 24                      | 0  | 1  | 26 | n.d.              | 1          | 1  | 1  | 1  |
| <b>Negativ</b>                         | 2                       | 27 | 26 | 1  | nein<br><i>no</i> | 26         | 26 | 26 | 26 |
| <b>Fraglich</b><br><i>Questionable</i> | 1                       | 0  | 0  | 0  | ja<br><i>yes</i>  | 0          | 0  | 0  | 0  |

**Tabelle 3: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Francisella tularensis* dargestellt.**  
*Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods. Note: only the *F. tularensis*-specific results depicted.*

| NAT-Methode<br>[Code] (total number)      | NAT richtig positiv<br><i>True positive results</i> |     |                            |     | NAT richtig negativ<br><i>True negative results</i> |     |                            |     |
|---|---|-----|----------------------------|-----|---|-----|----------------------------|-----|
|   | 01  |     | 04                         |     | 02  |     | 03                         |     |
|   | Absolut<br><i>Absolute</i>                          | %   | Absolut<br><i>Absolute</i> | %   | Absolut<br><i>Absolute</i>                          | %   | Absolut<br><i>Absolute</i> | %   |
| FILMARRAY BioThreat Panel (n= 3)          | 3   | 100 | 3                          | 100 | 3   | 100 | 3                          | 100 |
| Master diagnostica Tick-borne chip (n= 1) | 0   | 0   | 1                          | 100 | 1   | 100 | 1                          | 100 |
| LightMix <i>F. tularensis</i> (n= 4)      | 4   | 100 | 4                          | 100 | 4   | 100 | 4                          | 100 |
| <i>In house</i> PCR assay (n= 19)         | 17 <sup>§</sup>                                     | 89  | 18                         | 95  | 19  | 100 | 18                         | 95  |

<sup>§</sup> Fraglich Due to reporting questionable results, the number of true results has been reduced.

**Tabelle 4: Häufigkeit der Mitteilung verschiedener Befunde. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Brucella* dargestellt.**

*Absolute numbers of reported individual results.*

**Note:** only the *Brucella*-specific results are depicted in this table

| <i>n</i> = 30                          | Proben Nr. (Sample no.) |    |    |    |                   | Inhibition |    |    |    |
|--|-------------------------|----|----|----|-------------------|------------|----|----|----|
|  | 01                      | 02 | 03 | 04 |                   | 01         | 02 | 03 | 04 |
| <b>Befund</b><br><i>Result</i>         |                         |    |    |    |                   |            |    |    |    |
| <b>Positiv</b>                         | 30                      | 0  | 29 | 1  | n.d.              | 1          | 1  | 1  | 1  |
| <b>Negativ</b>                         | 0                       | 30 | 1  | 29 | nein<br><i>no</i> | 29         | 29 | 29 | 29 |
| <b>Fraglich</b><br><i>Questionable</i> | 0                       | 0  | 0  | 0  | ja<br><i>yes</i>  | 0          | 0  | 0  | 0  |

**Tabelle 5: Häufigkeit richtig positiver und richtig negativer NAT-Befunde bei Anwendern verschiedener Methoden. Anmerkung: in dieser Tabelle sind nur die Ergebnisse für *Brucella* dargestellt.**

*Absolute numbers and relative frequency of reported true positive and true negative results among various NAT methods.*

**Note:** only the *Brucella*-specific results are depicted in this table.

| NAT-Methode<br>[Code] (total number *) | NAT richtig positiv<br><i>True positive results</i> |     |                            |     | NAT richtig negativ<br><i>True negative results</i> |     |                            |     |
|--|---|-----|----------------------------|-----|---|-----|----------------------------|-----|
|  | 01  |     | 03                         |     | 02  |     | 04                         |     |
|  | Absolut<br><i>Absolute</i>                          | %   | Absolut<br><i>Absolute</i> | %   | Absolut<br><i>Absolute</i>                          | %   | Absolut<br><i>Absolute</i> | %   |
| Applied Biosystems Brucella (n= 1)     | 1   | 100 | 1                          | 100 | 1   | 100 | 1                          | 100 |
| FILMARRAY BioThreat Panel (n= 3)       | 3   | 100 | 3                          | 100 | 3   | 100 | 3                          | 100 |
| Sacace Brucella Real TM (n= 1)         | 1   | 100 | 1                          | 100 | 1   | 100 | 1                          | 100 |
| LightMix Brucella Genus (n= 1)         | 1   | 100 | 1                          | 100 | 1   | 100 | 1                          | 100 |
| <i>In house</i> PCR assay (n= 23)      | 23  | 100 | 23                         | 100 | 23  | 100 | 23                         | 100 |
| Commercial assay / kit (n= 1)          | 1   | 100 | 0                          | 0   | 1   | 100 | 0                          | 0   |

The following tests are listed under "Other commercial tests": Ingenetix BactoReal Kit Brucella spp. (1x).