

Medicum Bad Aibling MVZ GmbH - branch practice - Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany

Alianza Biohealth, LLC  
Wilberto Castillo  
10123 NE 98th Street  
  
USA 64157 Kansas City

Patient : **Van Eeden, Forest**

Date of Birth: 03/31/1994 female

**Final report**

Order-ID : **839492221**

Page **1/ 5**

Date of Reception/Report : 11/17/2025

11/19/2025

Analysis	Result	Units	Reference Range	Chart
<b>Haematology *</b>				
5 Blood count *				
5 Leucocytes *	6,60	Tsd./ul	4 - 10,4	[ ...*.... ]
5 Erythrocytes *	4,74	Mill./ul	3,96 - 5,16	[ .....*.. ]
5 Haemoglobin *	13,5	g/dl	11,6 - 15,5	[ ...*.... ]
<b>5 Haematocrit *</b>	<b>+</b> <b>48,30</b>	<b>%</b>	<b>35 - 45</b>	<b>[ ..... *&gt;</b>
<b>5 MCV *</b>	<b>+</b> <b>101,90</b>	<b>f1</b>	<b>80 - 96</b>	<b>[ ..... *&gt;</b>
5 MCH *	28,50	pg	26 - 33	[ ..*..... ]
<b>5 MCHC *</b>	<b>-</b> <b>28,00</b>	<b>g/dl</b>	<b>32 - 36</b>	<b>&lt;* ..... ]</b>
5 Thrombocytes *	239,00	Tsd./ul	176 - 391	[ ..*..... ]
5 Differential Blood count *				
5 Neutroph. Granulocytes *	59,70	%	40 - 75	[ ....*... ]
5 Lymphocytes *	31,10	%	17 - 47	[ ...*.... ]
5 Monocytes *	6,40	%	4 - 12	[ ..*..... ]
5 Eosin. Granulocytes *	1,10	%	< 7	[ .*..... ]
5 Basoph. Granulocytes *	1,70	%	< 2	[ .....*.. ]
<b>Borrelia EliSpot *</b>				
1 Borrelia b. Full Antigen *	0	SI		
Attention! Please note!				
Changed reference range!				
SI = Stimulation Index				
SI <= 9 NON-REACTIVE				
SI >= 10 REACTIVE				
1 Borrelia b. OSP-Mix *	0	SI		
Attention! Please note!				
Changed reference range!				
SI = Stimulation Index				
SI <= 4 NON-REACTIVE				

\*) Analytes (Measurands) are not accredited.; ~)Performance in contract laboratory: MVZ Labor Ravensburg, Germany;

**Medicum Bad Aibling MVZ GmbH - branch practice: Augsburg**

CEO: Eric Schwarzbach, Renate Douwes

Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany - phone: 0049 821 780 931 50

www.arminlabs.com

email: info@arminlabs.com

Amtsgericht Traunstein HRB 27384

VATReg-No.: DE321602336

Medicum Bad Aibling MVZ GmbH - branch practice - Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany

Alianza Biohealth, LLC	<b>Van Eeden, Forest</b>	DoB: 03/31/1994
Wilberto Castillo	Order-ID : <b>839492221</b>	11/19/2025 <b>Page 2/ 5</b>

Analysis	Result Units	Reference Range	Chart
----------	--------------	-----------------	-------

SI >= 5 REACTIVE

1 Borrelia burgdorferi LFA-1 \* 0 SI  
Attention! Please note!  
Changed reference range!

SI = Stimulation Index

SI <= 5 NON-REACTIVE

SI = 6 BORDERLINE

SI >= 7 REACTIVE

The results of the EliSpot tests indicate no current cellular activities against Borrelia burgdorferi.

Explanation of antigens:

-Borrelia-burgdorferi Full Antigen: Borrelia burgdorferi B31 reference strain (Borrelia burgdorferi sensu stricto)

-Borrelia-burgdorferi Peptide-Mix: OspA from Borrelia b. sensu stricto, Borrelia afzelii, Borrelia garinii + OspC native + DbpA recombinant.

-LFA-1 (Lymphocyte Function Antigen 1) Own body protein + Borrelia burgdorferi sensu stricto (shared epitope).

LFA1 can be associated with autoimmune diseases: collagenosis, Rheumatoid Arthritis, vasculitis. If positive or borderline positive look at: ANA, CCP-antibodies, ANCA.

#### CD3-/CD57+ Cells

5 CD3-/CD56+ Flow Cytometry				
5 T-cells: CD3+ %	74,67 %	59,7 - 82	[ .....*.. ]	
5 T-cells: CD3+ abs.	1533 /ul	900 - 2600	[ ..*..... ]	
5 NK-cells: CD56+ CD3- %	8,58 %	5,4 - 30,9	[ *..... ]	
5 NK-cells CD56+ CD3- abs.	176 /ul	77 - 427	[ ..*..... ]	
5 CD57+ NK-cells %	7,23 %	2 - 77	[ *..... ]	
5 CD57+ NK-cells abs.	- 13 /ul	100 - 360	<* ..... ]	

The result of the CD57-cell count indicates chronic immune-suppression, which can be caused by Borrelia burgdorferi or other bacteria like Chlamydia pneumoniae or Mycoplasma pneumoniae.

#### Basic Test/Tickplex Plus

\*) Analytes (Measurands) are not accredited.; ~)Performance in contract laboratory: MVZ Labor Ravensburg, Germany;

Medicum Bad Aibling MVZ GmbH - branch practice: Augsburg

CEO: Eric Schwarzbach, Renate Douwes

Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany - phone: 0049 821 780 931 50

www.arminlabs.com

email: info@arminlabs.com

Amtsgericht Traunstein HRB 27384

VATReg-No.: DE321602336

Medicum Bad Aibling MVZ GmbH - branch practice - Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany

Alianza Biohealth, LLC	<b>Van Eeden, Forest</b>	DoB: 03/31/1994
Wilberto Castillo	Order-ID : <b>839492221</b>	11/19/2025 <b>Page 3/ 5</b>

Analysis	Result	Units	Reference Range	Chart
7 Basic Test (new)				
7 B.burg.+afz.+gar.IgG	negative		negative	
	0,658	Ratio		
UNIT: Ratio				
0,90 - 0,99	=	Threshold		
7 B.burg.+afz.+gar.IgM	negative		negative	
	0,868	Ratio		
UNIT: Ratio				
0,90 - 0,99	=	Threshold		
7 B.burg.+afz.+gar+round bod.IgG	negative		negative	
	0,280	Ratio		
UNIT: Ratio				
0,90 - 0,99	=	Threshold		
7 B.burg.+afz.+gar+round bod.IgM	weak		negative	
	0,931	Ratio		
UNIT: Ratio				
0,90 - 0,99	=	Threshold		
<p>The antibodies indicate WEAK humoral immune responses against <i>Borrelia burgdorferi sensu stricto</i> + <i>B.b. afzelii</i> + <i>B.b. garinii</i>.</p> <p>The isolated IgM responses can be non-specific in the context of these viral infections e.g. EBV, CMV, Herpes Simplex virus 1/2, VZV, HHV6, Coxsackie virus, Echo virus, Parvovirus B19.</p> <p>The Tickplex Basic ELISA is a screening test for <i>Borrelia</i> pathogen-specific IgG and IgM antibodies and contains an antigen for persistent forms (round bodies) of <i>Borrelia burgdorferi</i>.</p> <p>Please cross-reference this with the results of EliSpots/i-Spots tests and the CD57+ NK cell test that you may have done.</p> <p>The interpretation of results should take into account the low presence of lymphocytes in the blood sample. This may be attributable to viral infections, including Epstein-Barr virus (EBV), cytomegalovirus (CMV), herpes simplex virus (HSV) types 1 and 2, varicella-zoster virus (VZV), human</p>				

\*) Analytes (Measurands) are not accredited.; ~)Performance in contract laboratory: MVZ Labor Ravensburg, Germany;

**Medicum Bad Aibling MVZ GmbH - branch practice: Augsburg**

CEO: Eric Schwarzbach, Renate Douwes

Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany - phone: 0049 821 780 931 50

[www.arminlabs.com](http://www.arminlabs.com)

email: [info@arminlabs.com](mailto:info@arminlabs.com)

Amtsgericht Traunstein HRB 27384

VATReg-No.: DE321602336

Medicum Bad Aibling MVZ GmbH - branch practice - Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany

Alianza Biohealth, LLC	<b>Van Eeden, Forest</b>	DoB: 03/31/1994
Wilberto Castillo	Order-ID : <b>839492221</b>	11/19/2025 <b>Page 4/ 5</b>

Analysis	Result Units	Reference Range	Chart
herpesvirus 6 (HHV6), Cocksackie virus, and Echo virus.			
<p>For further diagnostic clarification, the following investigations are recommended, if not already performed:</p> <p>Epstein-Barr virus (EBV) EliSpot, Cytomegalovirus (CMV) EliSpot, Herpes simplex virus (HSV) type 1/2 IgG, IgA, and IgM antibodies, Varicella-zoster virus (VZV) IgG, IgA, and IgM antibodies, Human herpesvirus 6 (HHV6) EliSpot Human herpesvirus 7 (HHV7) EliSpot, Cocksackie virus IgG and IgA antibodies, Echo virus IgG, IgA, and IgM antibodies</p> <p>These tests have been performed and their performance characteristics determined by ArminLabs I Medicum Bad Aibling MVZ GmbH, a CAP (College of American Pathologists Nr. 8458129 from 08.08.2022), Clinical Laboratory Improvement Amendments (CLIA) Nr. 99D2279264 from 03.31.2023 and the national accreditation body of the Federal Republic of Germany DAkkS, International Accreditation certified medical laboratory.</p> <p>These assays have not been cleared or approved by the U.S. Food and Drug Administration. The test results should be considered as one component of the physician`s clinical assessment for patients. Clinical history and current or/and chronical symptoms of the individual must be considered by the healthcare provider prior to any interventions. Comments provided by us, ArminLabs I Medicum Bad Aibling MVZ GmbH are not intended to be substituted for medical advice and therapy decisions. We do not replace the care of a medical practitioner or counselor and do not recommend self-diagnosis or self- medication. Depending on the nature of our testing, if you receive a high or moderate risk result, confirmatory testing may be recommended, and you will be encouraged to seek medical attention for additional follow up.</p> <p>ArminLabs I Medicum Bad Aibling MVZ GmbH makes no claims as to the diagnostic or therapeutic use of its tests or other informational materials. Please consult your provider for questions regarding test results, of before beginning any course of medication, supplementation, or dietary/lifestyle changes. Users should not disregard, or delay in obtaining, medical advice for any medical condition they may have, and should seek the assistance of their health care professionals for any such conditions.</p>			

\*) Analytes (Measurands) are not accredited.; ~)Performance in contract laboratory: MVZ Labor Ravensburg, Germany;

**Medicum Bad Aibling MVZ GmbH - branch practice: Augsburg**

CEO: Eric Schwarzbach, Renate Douwes

Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany - phone: 0049 821 780 931 50

[www.arminlabs.com](http://www.arminlabs.com)

email: [info@arminlabs.com](mailto:info@arminlabs.com)

Amtsgericht Traunstein HRB 27384

VATReg-No.: DE321602336

Medicum Bad Aibling MVZ GmbH - branch practice - Zirbelstr. 58 2nd floor - 86154 Augsburg - Germany

Alianza Biohealth, LLC	<b>Van Eeden, Forest</b>	DoB: 03/31/1994
Wilberto Castillo	Order-ID : <b>839492221</b>	11/19/2025 <b>Page 5/ 5</b>

<b>Analysis</b>	<b>Result Units</b>	<b>Reference Range</b>	<b>Chart</b>
validated by <b>Dr. med. Athanasios Vergopoulos, Mihail Pruteanu</b>			

\*) Analytes (Measurands) are not accredited.; ~)Performance in contract laboratory: MVZ Labor Ravensburg, Germany;