Serum titers are blood tests that measure whether or not you are immune to a given disease(s). More specifically a **quantitative serum titer** is a titer with a numerical value indicating your actual degree of immunity to a disease(s). The clinical sites you may visit or be working at require documented proof of immunity in the form of quantitative titers – simply getting the vaccination is not enough. Therefore when titers are drawn they must be quantitative titers, and you must provide copies of the official laboratory printouts containing the numerical values for Mumps, Measles, Rubella, Varicella, and Hep B immunity (see examples of a sample lab result on the following page).

**IMPORTANT THINGS TO BE AWARE OF/PITFALLS TO AVOID:**

1. If you don’t have a record of the previous vaccinations you’ve received, get your titers drawn first.
   - Why? Measure your immunity level before getting vaccinated to boost it. Your titers might indicate a high immunity to a specific disease, in which case you won’t need to get vaccinated for that disease.

2. Please get the exact type of titers we have asked you to.
   - **3 Common Mistakes Students Make:**
     - Quantitative vs. Qualitative titers – quantitative have a numerical value, qualitative simply indicates “immune vs. non-immune” (with no numerical value.) **Be sure to get quantitative titers. If you don’t get quantitative titers, we will ask you to get them redone.**
     - IgG vs. IgM titers – you need **IgG titers**; DO NOT get labs for IgM
     - Hbs AB IgG vs. Hbs AG IgG titers (for Hep B) – you need Hep B **AB (antibody) titers**, NOT Hep B **AG (antigen) titers.**

3. If the titer for a specific disease shows that you are not immune, you need to get vaccinated or re-vaccinated (also known as getting a booster).
   - **Note:** This is where previous vaccination records are helpful. Vaccinations for different diseases have different timelines and numbers of shots needed (ex. Varicella – 2 shot series 4-6 weeks apart vs. Hep B – 3 shot series over 6 months). If a specific titer indicates non-immunity, then your physician (or the Student Health Clinic) can direct you on the next steps for vaccination.

4. Once vaccinated, titers should not be drawn until 30 days after the vaccination.
   - Why? If drawn too soon afterwards, the titers will indicate non-immunity as the vaccine will still be in your system. Don’t make the mistake of getting a titer drawn prematurely in order to meet the deadline.

**WHAT TO DO IF ANY OF YOUR QUANTITATIVE TITERS COME BACK NON-IMMUNE:**

1. Consult your physician about your vaccination history – how many immunizations have you already received for the disease(s)?
2. If you haven’t already had it, start the vaccination series for the non-immune disease. If you’re part way through the vaccination series, complete it.
3. If you’ve completed the series, you will need to get an additional immunizations for that disease.
4. After completing the series, or getting the booster, wait 30 days and then get a follow-up titer. DO NOT GET THE TITER TOO EARLY OR IT WILL COME BACK NON-IMMUNE.

**WHAT TO DO IF YOUR HEP B FOLLOW-UP TITER STILL COMES BACK NON-IMMUNE**

If you have received all the immunizations possible (by completing the series and getting boosters), you may not convert to immunity. At this point, it is okay. We will need all documentation indicating your non-immunity to the disease, and you will need to complete the Hep B Nonresponder form.
**Rubella Immune Status**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th>Units</th>
<th>Ref. Range</th>
<th>Collected Date/Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Value</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>EN</strong></td>
<td></td>
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</tbody>
</table>

**EIA Value**

Explanation of Test Results

- **< 0.91**
  - **Negative**: No Rubella IGg antibody detected

- **0.91 - 1.09**
  - Equivocal

- **> or 1.10**
  - Positive: Rubella IGg antibody detected

The presence of Rubella IGg antibody suggests immunization or past or current infection with Rubella virus.

**Measles IgG Ab (Rubella)**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th>Units</th>
<th>Ref. Range</th>
<th>Collected Date/Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Value</td>
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<tr>
<td><strong>EN</strong></td>
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</tbody>
</table>

**EIA Value**

Explanation of Test Results

- **< 0.90**
  - Negative: No Rubella (Measles) IGg antibody detected

- **0.91 - 3.00**
  - Equivocal

- **> or 3.01**
  - Positive: Rubella (Measles) IGg antibody detected

Positive results suggest high clinical suspicion of previous infection with the virus and M/H by Rubella virus. Patients exhibit a positive IGg antibody detected.

**Mumps Virus IgG Ab by EIA Serum**

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Result</th>
<th>Units</th>
<th>Ref. Range</th>
<th>Collected Date/Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIA Value</td>
<td></td>
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<tr>
<td><strong>EN</strong></td>
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</tbody>
</table>

**EIA Value**

Explanation of Test Results

- **< 0.90**
  - Negative: No Mumps IGg antibody detected

- **0.91 - 1.09**
  - Equivocal

- **> or 1.10**
  - Positive: Mumps IGg antibody detected

A positive result indicates that the patient has immunity to Hepatitis B virus.
<table>
<thead>
<tr>
<th>Test Name</th>
<th>In Range</th>
<th>Out of Range</th>
<th>Reference Range</th>
<th>Lab</th>
<th>EIA value</th>
<th>EXP. VALUE OF TEST RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varicella-Zoster Virus IGG AB</td>
<td>1.75</td>
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</table>

**EXPLANATION OF RESULTS**

- **Positive Result**: Indicates that the patient has antibody to VZV. It does not differentiate between active or past infection. The clinical diagnosis must be interpreted in conjunction with the clinical signs and symptoms of the patient.

- **Negative Result**: The VZV IGG antibody is not detected.

**Performing Laboratory Information**:

- EN: Quest Diagnostics-West 31150 5410 Fullbrook Ave West Hills CA 91304 Laboratory Directors: Lee R. Wilburson R.J.
- EZ: Quest Diagnostics Hematia Institute-West 13506 Orange Way San Diego CA 92131 Laboratory Directors: Jan Nakamura MD, PhD

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