Target Value

Lower TEA Limit

Target Value - TEA

Target Value +TEA

Upper TEA Limit

Directions: For each problem, calculate the lower and upper TEA limits with the information provided. Complete the diagrams.

1. **Percentage (%)** The CLIA TEA for chloride is Target Value ± 5%.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **QC Material** | **Target Value** | **TEA in units** | **Lower TEA Limit** | **Upper TEA Limit** |
| **Chloride** | Level I | 100 mmol/L |  |  |  |
| Level II | 120 mmol/L |  |  |  |



1. **Absolute concentration limit** The CLIA TEA for potassium is Target Value ± 0.5 mmol/L.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **QC Material** | **Target Value** | **TEA in units** | **Lower TEA Limit** | **Upper TEA Limit** |
| **Potassium** | Level I | 3.5 mmol/L |  |  |  |
| Level II | 5.8 mmol/L |  |  |  |



1. **Distribution of a survey group** The CLIA TEA for TSH is Target Value ± 3SD.

Results from most recent TSH survey. Values are reported in mU/L unless otherwise specified

|  |  |  |  |
| --- | --- | --- | --- |
| **Sample** | **Mean** | **SD** | **%CV** |
| C-1 | 0.6 | 0.05 | 8.3% |
| C-2 | 1.0 | 0.08 | 8.0% |
| C-3 | 1.2 | 0.08 | 6.7% |
| C-4 | 3.0 | 0.26 | 8.7% |
| C-5 | 4.2 | 0.33 | 7.9% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **QC Material** | **Target Value** | **TEA in units** | **Lower TEA Limit** | **Upper TEA Limit** |
| **TSH** | Level I | 0.90 mU/L |  |  |  |
| Level II | 4.50 mU/L |  |  |  |



1. **Combination of requirements, percentage and absolute concentration units (for lower concentrations)**

The CLIA TEA for glucose is Target Value ± 0.3 mmol/L or ± 10%, whichever is greater.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **QC Material** | **Target Value** | **TEA in units** | **Lower TEA Limit** | **Upper TEA Limit** |
| **Glucose** | Level I | 2.78 mmol/L |  |  |  |
| Level II | 5.72 mmol/L |  |  |  |



1. **There is no published TEA limit, you decide to use a recent survey report for CD4 and multiply the peer group median %CV by a factor of 3.**

Results from most recent CD4 survey. Values are reported in cell/uL unless otherwise specified.

|  |  |  |  |
| --- | --- | --- | --- |
| **Sample** | **Mean** | **SD** | **%CV** |
| C-1 | 287.5 | 21.0 | 7.3% |
| C-2 | 850.1 | 41.6 | 4.9% |
| C-3 | 61.0 | 4.1 | 6.7% |
| C-4 | 771.4 | 40.1 | 5.2% |
| C-5 | 162.0 | 9.7 | 6.0% |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CD4** | **QC Material** | **Target Value** | **TEA in units** | **Lower TEA Limit** | **Upper TEA Limit** |
| Level I | 50 cell/uL |  |  |  |
| Level II | 200 cell/uL |  |  |  |
| Level III | 700 cell/uL |  |  |  |

