
Lab Dept: Chemistry

Test Name: CYCLOSPORINE LEVEL

General Information

Lab Order Codes: CYCS

Synonyms: CSA, Cyclosporin A, Sandimmune®; Gengraf; Neoral

CPT Codes: 80158 - Cyclosporine

Test Includes: Cyclosporine level measured in ug/L.

Logistics

Test Indications: This test is used to monitor blood concentration of cyclosporine A. This test selectively measures only the parent drug. Dose or dose intervals are adjusted to achieve therapeutic concentration.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Fairview University Labs (Fairview Test: CYC)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Weekdays: 7am to 10pm
Weekend and Holidays: 7:30am to 3pm
Specimen MUST arrive by 12pm on weekends and 4pm on weekdays at the testing lab to be completed same day.
If results are needed STAT, order STAT and contact Children's lab immediately.

Turnaround Time: Same day for specimens meeting the testing cutoff times, test set-up daily.

Special Instructions: Usual sampling time is immediately prior to the next dose.

Specimen

Specimen Type: Whole blood

Container: Lavender top (EDTA) tube
Alternate: Green, No Gel (Lithium or NaHep)

Draw Volume: 2 mL (Minimum: 0.4 mL) blood

Processed Volume: Same as Draw Volume

Collection: EDTA whole blood (purple top) is preferred.
Alternate: Heparinized whole blood is acceptable.

Special Processing: Lab Staff: **Do Not** centrifuge specimen. Submit specimen in original collection container. Store at ambient temperature or refrigerated and ship specimen at ambient temperature with next available courier. For STAT orders, see MIQ for further courier guidance.

Patient Preparation: None

Sample Rejection: Mislabeled or unlabeled specimen

Interpretive

Reference Range:

Therapeutic range based on draw immediately prior to next dose. Therapeutic Default Reference Range: 50 – 400 ug/L	
Kidney Transplant (months post transplant):	Range (ug/L)
Pediatric	
0 – 3 months:	175 - 200
3 – 6 months:	150 – 175
6 – 9 months:	125 – 150
9 – 12 months:	100 – 125
>12 months:	75 – 100
Adult	
0 – 3 months:	175 – 200
3 – 6 months:	150 – 200
6 – 12 months:	125 – 150
>12 months:	75 – 100
Heart Transplant (months post transplant)	Range (ug/mL)
Pediatric	

0 – 12 months:	200 – 250
>12 months:	100 – 125
EBV PCR >1000 copies/mL:	80 – 100
Adult	
0 – 3 months:	150 – 250
3 – 6 months:	125 – 225
6 – 12 months:	100 – 200
>12 months:	50 – 150
Heart – Lung Block	200 – 250
Lung Transplant (months post transplant)	Range (ug/L)
0 – 12 months:	175 – 225
>12 months:	125 – 175
Liver Transplant (months post transplant)	Range (ug/L)
0 – 6 months:	150 – 200
>6 months:	100 – 150
Pancreas Transplant (months post transplant)	Range (ug/L)
0 – 6 months:	200 – 250
6 – 12 months:	150 – 200
>12 months:	100 – 150
Bone Marrow Transplant	200 – 400 ug/L

Critical Values:

>400 ug/L

Limitations:

The recommended therapeutic ranges described above apply to trough specimens collected just before the next dose. Blood collected at other times will yield higher results.

Methodology: High Performance Liquid Chromatography/Tandem Mass Spectrometry (HPLC-MS/MS)

References: [Fairview-University Medical Center](#) April 2016

Updates:

- 3/4/2004: Test moved from MedTox to Mayo Medical Laboratories. Note: Toxic range changed from >500 to \geq 400 ng/mL.
- 4/20/2004: Reference range change from 100-300 ng/mL to 100-400 ng/mL. Critical range of >400 ng/mL removed. Method changed to HPLC-MS/MS.
- 1/30/2006: Test moved from Mayo Medical Laboratories to Fairview University Laboratories for faster turnaround time. Note addition of a critical value.
- 8/20/2009: Critical value previously listed as >600 ug/L.
- 11/12/2012: Reference range update.