



**Represented in Chile by the Universidad de Colonia**


**DOCUMENTS FOR WORK ABOVE 5,500 MASL  
CERRO CHAJNANTOR, SAN PEDRO DE ATACAMA**

**GENERAL MANAGER: Jim Blair**

**SIGNATURE \_\_\_\_\_**


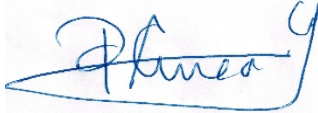
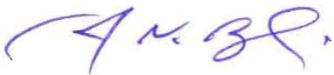
**INSTRUCTIVE CCAT-005**

**PROGRESSIVE EXPOSURE FIRST WEEK AT 5,600 MASL**

 <p>CCAT-prime Represented in Chile by the University of Cologne</p>	<b>OCCUPATIONAL SAFETY MANAGEMENT SYSTEM CCAT</b>	Date: April 2020
	<b>PROGRESSIVE EXPOSURE FIRST WEEK AT 5600 MASL</b>	Version: 02
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October 2019	April 2020	April 2020
		
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## 1. Objective

Facilitate an adequate acclimatization to hypobaric hypoxia at extreme altitude through progressive exposure to altitude during the first week of work, thus fulfilling one of the requirements indicated and demanded by the Technical Guide D. S. N°28 on occupational exposure to Chronic Intermittent Hypobaric at High Altitude described by the Ministry of Health of Chile for work at or above 5,500 meters above sea level.

## 2. Scope

This instruction must be known and complied with by all the personnel that directly or indirectly participate in the CCAT Project carry out work at or over 5,500 masl.

## 3. Responsibilities

**CCAT Management:** Require all workers in their first week of work for CCAT remain in the field no longer than the hours indicated in this instruction by shift roles.

In the case of contract managers and field supervisors, they must provide the means for workers to be transported (descended) under 3,000 meters above sea level when they reach the maximum exposure hours indicated for the first, second and third days.


## 4. Definitions

**Extreme altitude:** over 5,500 meters above sea level.

**Progressive exposure:** for the duration of CCAT work at high or extreme geographic height, no more than 4 hours on the first day of the first week, 6 hours on the second day of the first week, and 8 hours on the third day of the first week.

## 5. Procedure

Given the geographical altitude where the CCAT Project is located, a work plan must be in place so that the worker who is going up for the first time has special conditions and requires additional vital signs controls, pertinent activities, and the adequate moment to descend.

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On the first day of the ascent to the CCAT summit site (or any work above 3,000 masl), an evaluation of the signs of response to the geographical height is considered at the CCAT Basecamp or ALMA-AOS polyclinic. This is an indispensable requirement in order to enter the CCAT project works at geographic heights above 3,000 masl.


On the first day of work, a worker will only be able to perform 4 hours of work activities and then they must descend. On the second day, the worker may perform only 6 hours of work activities and then must descend. On the third day the worker may perform 8 hours of work activities, then they must descend.

In the following days the worker will be able to carry out their normal work. The fulfillment of hours of permanence in the first week of work at CCAT areas above 3,000 masl must be kept and recorded.

## 6. References

Technical Guide on Occupational Exposure to Chronic Intermittent Hypobarism due to High Altitude, Sanitary authorization for work over 5,500 masl, Item 17 page 20.

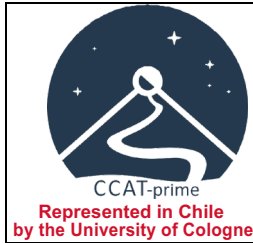
[https://www.minsal.cl/sites/default/files/guia\\_hipobarism\\_altitud.pdf](https://www.minsal.cl/sites/default/files/guia_hipobarism_altitud.pdf)

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## 7. Annex

### Progressive Exposure Registration First Week at 5,500 meters altitude

<b>INITIAL ASSESSMENT AND DAILY MONITORING</b>			
Date			
Names and family names:			
RUT:		Age:	
Occupation and work center:			
Shift System			
Geographical height at work place			
<b>a) ARRIVAL:</b>			
Blood Pressure:	_____	/ mmHg	
Heart rate:	_____		X'
Saturation O2:	_____		%
Lake Louise Test Results			
Medical indication:	YES _____	NO _____	
<b>b) At 24 hrs:</b>			
Blood Pressure:	_____	/ mmHg	
Heart rate:	_____		X'
Saturation O2:	_____		%
Lake Louise Test Results			
Medical indication:	YES _____	NO _____	
<b>c) At 48 hours:</b>			
Blood Pressure:	_____	/ mmHg	
Heart rate:	_____		X'
Saturation O2:	_____		%
Lake Louise Test Results			
Medical indication:	YES _____	NO _____	



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Daily monitoring by trained staff					
Signs / Symptoms	3rd day	4th day	5th day	6th day	7th day
Heart Rate					
Respiratory Frequency					
Oxygen saturation (pulse oximeter validated for geographical altitude 5,600 masl)					
Blood Pressure					
Headache					
Nausea					
Vomiting					
Fatigue					
Drowsiness					
Mood Alteration					
Paresthesia (tingling in extremities)					
Paresis (loss of strength in the extremities)					
Decreased appetite					

\_\_\_\_\_  
Signature of Worker

\_\_\_\_\_  
Signature Control Responsible