

# PrevHeat

Program developed by Prof J. Malchaire Unité industrial Hygiene and work Physiology, UCL, Belgium  
 The programme makes it possible to analyse simply a thermal working condition and to search for improvements.

The program invites:

- to evaluate the present situation
- to search for possible improvements
- to evaluate the situation after the improvements

This is done for each parameter successively before the working situation is evaluated globally.

Tables help to analyse the situation and give advices to search for improvements.

JUDGMENT	EXAMPLES
LOW	In general between 12 and 18°C
NORMAL	The most comfortable zone, in general between 18 and 25°C
RATHER HIGH	Summer temperatures of 25 to 32°C
HIGH	In general between 32 and 40°C
EXTREME	Temperatures tolerable only for a short time (> 40°C in general)

N.B. The temperatures are given here above in order to provide some indication of what is "very high" or "extreme". It is suggested not to measure these temperatures at any given time, but to appreciate the situation in general from the opinions of the workers and the experience acquired.

The interpretation is performed directly by the programme, for the work situation in its present state, as well as for the anticipated situation, once the improvements will be implemented.

PREVHEAT Program: Simple search for improvements of the thermal work environment							
Synthesis and interpretation							
Temperature	Before	weak	normal	high	very high	extreme	Aspirer les gaz chauds à la sortie de la presse; Pratiquer une ouverture en toiture; maintenir les volets ouverts
	After						
Humidity	Before	weak	normal	high	very high	extreme	Evacuer les gaz chauds et humides de la presse
	After						
Radiation	Before	cold	normal	hot	very hot	extreme	Placer une toile d'alux en écran entre la partie arrière de la presse et le poste de travail
	After						
Drafts	Before	strong and cold	light and cold	none	light and hot	Strong and hot	Installer un ventilateur d'ambiance (soufflant vers le haut) au dessus du poste face à la presse
	After						
Workload	Before	rest	light	average	heavy	very heavy	Allonger le bras du palan pour couvrir toute la surface de travail et faciliter l'alimentation de la presse
	After						
Clothing	Before	very light	comfortable	awkward	very awkward	extreme	garder les mêmes vêtements, mais les faire sécher
	After						
Interprétation	Before	Working conditions of category: 4		Short-term constraint: risk for health after 30 to 120 minutes of exposure;			
	After	Working conditions of category: 2		Discomfort: discomfort being able to be very important, but without health risk;			

The interpretation is based on the "Predicted Heat Strain (PHS) model" that was validated during an European Research conducted internationally by several laboratories  
 BIOMED Research contract BMH4-CT96-0648: Assessment of the risk of heat disorders encountered during work in hot conditions - August 1999



These interpretations according to average parameters are given only as an indication and do not engage the author. The real state of the constraint according to the real parameters can be evaluated by means of the Analysis\_PMV\_PPD\_WBGT\_PHS.xls program available on the same site [www.deparisnet.be](http://www.deparisnet.be)

The PREVHEAT programme can be used freely provided quotation is made of the source and the author in any report or any publication

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