

gol128@sptums.com :

(CIS IOM)
NIOSH

()
± / (PVC)

() () :
()

(P< /)

IOM

IOM "

/ ± /) (P< /)
(/ ± / / ± /) (/ ± / / ± /)

CIS (P> /)

Kerr)

(et al. 2002; James and Zalk 1998

National

Institute of Occupational Safety and Health (NIOSH), U.S. Environmental Protection Agency (EPA), International Agency for Research on Cancer (IARC)

(EPA 1998)

Ashley et al. 2003; James and Zalk 1998;)

Kriech et al. 2004; Tsai and Vincent 2001; .(Predicala and Maghirang 2003

Occupational "

Safety and Health Administration (OSHA)

OSHA, ID-) (

.(215 1998; NIOSH 7600 1994

"

Conical Inhalable Sampler (CIS)

(

.(EPA 1998)

"

(Open-face)

Clinkenbeard)

(Closed-face)

(et al. 2002

Baldwin and)

/

American Conference of Governmental Industrial Hygienists(ACGIH)

.(Maynard 1998

()

(TA2 Air Flow) :

/

(Kuo et al. 1997) :

(:

()

(Tirgar et al. 2006) :

SAS

NIOSH (NIOSH 7600 1994) (Institute of Occupational Medicine (IOM) CIS

/ (Side by side)

Beckman) PVC

DU M.S.A (

SKC

/ / / / / / / PCXR3

± /

/ CIS

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($p < /$)

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IOM

IOM

CIS

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(Chen et al. 2002)

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(Werner et al. 1999)

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IOM

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IOM

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$$E_{IOM} = B \times E_{37mm}$$

E_{IOM}

(

B

CIS

IOM

() Kuo . IOM
CIS % % %

(Kuo et al. 1997)

IOM

IOM

CIS

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IOM

IOM

(% /)

(% /) IOM

Ashley et al. 2003;)

(% /)

(% /) CIS

(Shin and Paik 2000

IOM

CIS

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(CIS

IOM)

(P< /)

(Kuo et al. 1997)

)

(Kenny et al. 1999)

Kenny

(

GSP IOM

GSP

:

IOM CIS / (Bonin et al. 1995)

CIS () (Li et al. 2000)

IOM / /

Li CIS (Li et al. 2000)

IOM CIS)

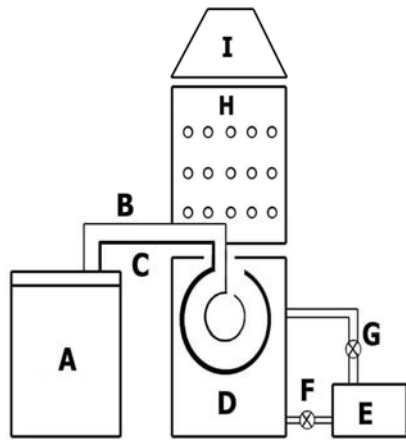
CIS (

IOM

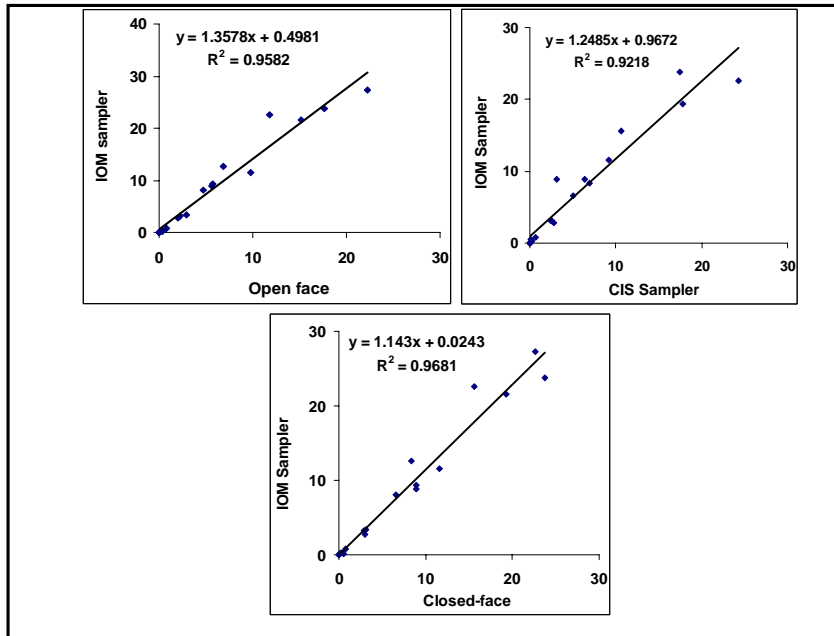
IOM :

:(Kenny et al. 1997)

(/ ")



E D C B () A
I H G F



IOM

CIS

(min)	(cm)	(g/l)
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(N =)

SD ($\mu\text{g}/\text{m}^3$)		($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	
/	/	/	/	Close-face
/	/	/	/	Open-face
/	/	/	/	IOM
/	/	/	/	CIS

IOM**CIS**

R ²	IOM		CIS
	SE/B	B	
/	/	/	
/	/	/	
/	/	/	

: B

: SE/B

: R²

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