

OASYS with Vitalograph asma-1 usb monitor

Occupational Asthma expert SYStem

Objective methods of diagnosis are vital in confirming cases of occupational asthma and serial tests provide a low cost and effective solution.

What is OASYS?

OASYS (Occupational Asthma expert SYStem) is free to use software that has proven to be a sensitive and expert tool for detecting work related changes in peak expiratory flow readings. OASYS has been developed by Midlands Thoracic Society and is available for download from their website www.occupationalasthma.com. This simple to use system combats many of the difficulties associated with visual analysis of records: it also supports effective asthma management and provides validated evidence for occupational asthma related insurance claims.

Vitalograph is a world leading provider of outstanding quality respiratory diagnostic devices, clinical trial services and medical equipment servicing. With a pioneering heritage of excellence spanning half a century Vitalograph continues to make valuable contributions to effective medical care and enhanced quality of life.

OASYS has been developed by world leaders in occupational medicine and provides:

- Automated data capture, archiving and analysis
- Accurate and reliable asma-1 usb data download
- > Validated Work Effect Index of work related asthma

How does OASYS work?

OASYS is a computer diagnostic occupational asthma expert system which assesses the probability of an individual having work-related asthma.





The OASYS program scores each rest-work-rest or work-rest-work complex in a serial peak flow record between 1 and 4.

OASYS Score	Probability of Occupational Asthma
1	< 1%
2	1% - 49%
3	50% - 99%
4	> 99%

OASYS consists of the following modules:

- A module for allowing entry of PEF readings recorded by the patient for either manual entry of PEF data or automatic capture of PEF data from the Vitalograph asma-1 usb respiratory monitor
- A module to plot these recordings in a graph format. These graphs include a plot of mean PEF for each two hour period separated into work/rest days and plots of daily maximum, minimum and mean readings again divided into work and rest periods
- A module to calculate scores indicating how likely it is that an occupational asthma diagnosis will be supported by this data

Vitalograph are pleased to support this work and have developed an interface to allow use of the asma-1 with OASYS. A donation from the sale of each asma-1 device used with the OASYS web-based software will be used to fund ongoing research in the Midlands Thoracic Society, United Kingdom.

Technical Specification for asma-1 usb:

Model Number: 4000 **Product:** Respiratory Monitor

Accuracy:

Better than PEF \pm -5%, FEV₁ \pm -3%

Parameters Displayed: PEF & FEV₁

Sensor: Stator rotor Flow Impedance:

Better than 0.15 kPa/L/s at 14 L/s

Power Supply: AAA batteries

Size: 113 x 63 x 48mm

Weight: 55g

Performance Standards: ISO 23747:2007, ISO 26782:2009 ATS/ ERS 2005

Operating Temperature:

17 - 37°C

Safety Standards: EN ISO 60601-1:2005

Medical Safety Standard:

Medical Devices Directive 93/42/EEC

(as amended)

Designed & Manufactured Under: ISO 13485:2003, FDA 21CFR820 and CMDR

Ordering Info:

OASYS software:

http://www.occupationalasthma.com/oasys.aspx

40448 4000 Respiratory Monitor asma-1™ usb no software

28350 2820 BVF Bacterial/Viral Filters (50) **20242** 2024 SafeTway® mouthpieces (200) 20980 2024 SafeTway® Mini mouthpieces (50)

20303 2030 Noseclips disposable (200)

Selected References:

- 1. OASYS website: www.occupationalasthma.com
- 2. Development of OASYS-2: a system for the analysis of serial measurements of peak expiratory flow in workers with suspected occupational asthma. P.F.G.Gannon, D.T.Newton, J.Belcher, C.F.A.Pantin, P.S.Burge: Thorax 1996; 51: 484-489
- Effect of the number of peak expiratory flow readings per day on the estimation of diurnal variation. P.F.G.Gannon, D.T.Newton, C.F.A.Pantin, P.S.Burge: Thorax 1998; 53: 0-2
- 4. A new method of diagnosing occupational asthma from serial peak expiratory flow records. P.Bright, D.T.Newton, C.F.A.Pantin, P.S.Burge: Am. J Resp Crit Care Med 1996; 153: A184
- The diagnosis of occupational asthma from serial measurements of lung function at and away from work. P. Bright, P.S.Burge: Thorax 1996: 51: 857-863
- 6. Effect of peak expiratory flow data quantity on diagnostic sensitivity and specificity in occupational asthma K.M. Thickett, J.S. McCoach, J.M. Gerber, S. Sadhra and P.S. Burge, Eur Respir J 2004; 23:730-734
- 7. Evidence based guidelines for the prevention, identification, and management of occupational asthma PJ Nicholson, P Cullinan, A J Newman Taylor, P S Burge, C Boyle Occup Environ Med 2005;62:290-299.
- 8. Do long periods off work in peak expiratory flow monitoring improve the sensitivity of occupational asthma diagnosis? Vicky C Moore, Maritta S Jaakkola, Cedd B S G Burge, Charles F A Pantin, Alastair S Robertson, P Sherwood Burge Occup Fnviron Med 1999:56:758-764
- 9. Moore VC, Jaakkola MS, Burge CBSG, Robertson AS, Pantin CF, Vellore AD, Burge PS, A New Diagnostic Score for Occupational Asthma, Chest, 2009; 135: 307-314
- 10. Burge CBSG, Moore VC, Pantin CFA, Robertson AS, Burge PS, Diagnosis of occupational asthma from time point differences in serial PEF measurements, Thorax, 2009; 64: 1032-1036
- 11. Moore VC, Jaakkola MS, Burge CBSG, Pantin CF, Robertson AS, Vellore AD, Burge PS, PEF analysis requiring shorter records for occupational asthma diagnosis, Occup Med (London), 2009; 59: 413-417



UK Sales Vitalograph Ltd. Maids Moreton Buckingham MK18 1SW England Tel: 01280 827110 Fax: 01280 823302 e-mail: sales@vitalograph.co.uk www.vitalograph.co.uk

Export Sales Vitalograph Ltd. Maids Moreton Buckingham MK18 1SW England Tel: +44 1280 827120 Fax: +44 1280 823302 e-mail: sales@vitalograph.co.uk e-mail: info@vitalograph.de www.vitalograph.eu

Vitalograph GmbH Rellinger Straße 64a 20257 Hamburg Germany Tel: (040) 547391-0 Fax: (040) 547391-40 www.vitalograph.de

Vitalograph Inc. 13310 West 99th Street Lenexa Kansas 66215 USA Tel: (913) 888 4221 Fax: (913) 888 4259 e-mail: vitcs@vitalograph.com www.vitalograph.com

Vitalograph (Ireland) Ltd. **Gort Road Business Park Fnnis** Co Clare Ireland Tel: (065) 6864100 Fax: (065) 6829289 e-mail: sales@vitalograph.ie www.vitalograph.ie