

Title (en)  
SHAPE MEMORY THERMAL EXPOSURE MONITOR

Title (de)  
BERWACHUNGSVORRICHTUNG FÜR THERMISCHE EXPOSITION MIT FORMGEDÄCHTNIS

Title (fr)  
MONITEUR D'EXPOSITION THERMIQUE A MEMOIRE DE FORME

Publication  
**EP 1543302 A4 20050727 (EN)**

Application  
**EP 02752538 A 20020723**

Priority  
US 0223385 W 20020723

Abstract (en)  
[origin: WO2004013591A1] A cumulative thermal exposure monitor (10) having a housing (11) with a fluid sealed interior cavity (16) and a thermally-responsive member (20) therein formed of a shape memory material which moves an indicator (21), wherein the thermal properties of the housing, cavity, and shape memory material transition temperature range are calibrated relative to one another to function in mutual cooperation such that the thermally-responsive member gradually changes from a first shape to a second shape upon absorption of heat energy over time to closely match a thermal deterioration profile of a perishable product, and to indicate the cumulative amount of heat energy absorbed and whether, at any time, the temperature has been above a preferred storage temperature range for a period of time sufficient to cause any degree of deterioration based on a known time and temperature thermal deterioration profile of the perishable product.

IPC 1-7  
**G01K 1/02**; **G01K 3/00**; **G01K 5/00**; **G01K 5/48**

IPC 8 full level  
**G01K 1/02** (2006.01); **G01K 3/04** (2006.01); **G01K 5/48** (2006.01)

CPC (source: EP)  
**G01K 1/022** (2013.01); **G01K 3/04** (2013.01); **G01K 5/483** (2013.01)

Citation (search report)

- No further relevant documents disclosed
- See references of WO 2004013591A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)  
**WO 2004013591 A1 20040212**; AU 2002368140 A1 20040223; EP 1543302 A1 20050622; EP 1543302 A4 20050727

DOCDB simple family (application)  
**US 0223385 W 20020723**; AU 2002368140 A 20020723; EP 02752538 A 20020723