

## 編者について

EULA BINGHAM,  
PHD: 米シンシ  
ナチ大学医学部の環  
境衛生学教授。1977-  
1981年には職業安全衛  
生局(OSHA)の局長補佐を務め  
た。これまでに100報以上の論文を  
査読つき雑誌に発表、その主題は職  
場および環境中の呼吸器有害物、  
発がん物質、産業および環境衛生  
政策などに及ぶ。

BARBARA COHRSSEN:  
COHRSSEN ENVIRONMENTAL  
社の会長で、産業衛生士・環境  
評価士の資格を持つ。PATTY'S  
INDUSTRIAL HYGIENEの共編者  
を務めたほか、産業および環境衛  
生・安全性の分野で30年以上の経  
験を持つ。

## 旧版の書評から

「便利で信頼できるガイドとして強  
く推薦する」

- Choice

「傑出した、必要不可欠な著作。他  
に並ぶもののがなく、代替がきか  
ない」

- Chemical Health & Safety

「(本書は)労働者の健康を損な  
う潜在的な危険性を持つ工業用化  
学品に関して、毒性データを提供す  
る。...フォーマットを改善し、内容を  
再編した。...毒物学という分野がい  
かに発展してきたかを示す。...また  
工業災害の危険性認識と防止につ  
いて精査する」

- Vet Human Toxicology

刊行記念特価を  
ご利用下さい

**US \$2295**

2012年10月31日まで有効  
それ以降: US \$2700

# 産業毒物学事典の決定版

## 「パティの毒物学」

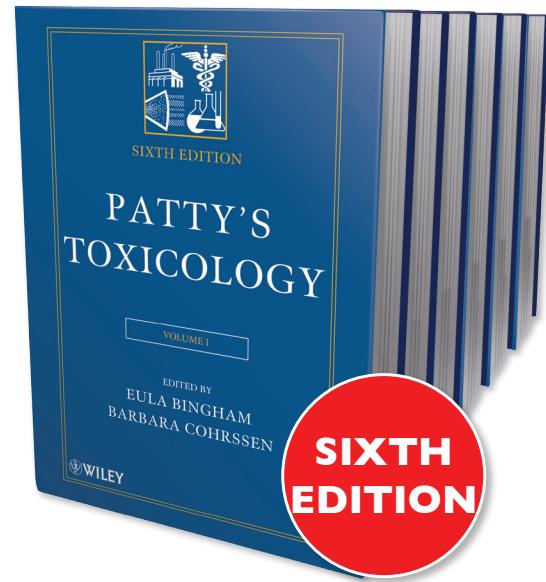
大幅な改訂を受けた最新版刊行!

### Patty's Toxicology, Sixth Edition

全6巻 (索引つき)

ハードカバー · 6200 pp · 2012年7月刊行 · ISBN: 978-0-470-41081-3

産業毒物学の最新知識をいつ  
でも参照できる事典 Patty's  
Toxicology の最新第6版が刊  
行されました。金属、高分子か  
ら物理的因子まで、産業現場で  
用いられる広範な物質を網羅  
し、最新のデータを収録してい  
ます。今回の改訂版では、旧版  
と同じ読みやすいフォーマット  
を採用しながらも、近年の展開  
を反映して新しい章を追加、さ  
らに既存の章も最新知識を反  
映して改訂しています。



この第6版で新しく取り上げられる主題としては、「ナノテクノロジー」「香  
料と食品産業」「放射性化学物質の管理」「金属加工油剤」「医薬品」など  
があります。また「ベンゼン」「芳香族化合物」「火災による煙と燃焼生  
成物」「高周波・マイクロ波の放射(携帯電話)」「おがくず」などの章は、  
内容が拡充されました。発がん性および非発がん性リスク評価に関するデ  
ータも改訂されました。各物質について、CASナンバー、物理的および化  
学的性質、曝露限界、労働時の生物学的許容量などの情報が収録されま  
す。

#### 最新第6版の特徴:

- ・ 内容を増補改訂
- ・ 40%近くを占める新しい寄稿者が、新鮮な視点を導入
- ・ 放射性化学物質の管理、包括的化学物質安全政策、食品産業における  
香料の毒性、ナノテクノロジー、金属加工油剤など新しい章を追加
- ・ 30章が新しい著者により大幅に増補改訂

## ご注文は最寄りの洋書店で承ります

各種お問い合わせは Wiley・ジャパンまでお申し付け下さい

〒112-0002 東京都文京区小石川1-28-1 フロンティア小石川ビル4F

TEL (03) 3830-1232 (書籍営業) FAX (03) 5689-7276

Email marketing@wiley.co.jp 日本語ホームページ www.wiley.co.jp

ブログ「Wiley・サイエンスカフェ」 www.wiley.co.jp/blog/pse

[www.wiley.com/go/pattys](http://www.wiley.com/go/pattys)

 WILEY

# Table of Contents

<b>1 Ionizing Radiation</b> Henry Spitz, Ph.D. and Roy E. Albert, MD	<b>25 Inorganic Compounds of Carbon, Nitrogen, and Oxygen</b> George D. Leikauf, Ph.D. and Daniel R. Prows, Ph.D.	<b>48 Aliphatic Carboxylic Acids: Saturated</b> Maria Szilagyi, DABT	<b>69 Synthetic Polymers—Cellulosics, Other Polysaccharides, Polyamides, and Polyimides</b> Finis L. Cavender, Ph.D., DABT, CIH	<b>90 Wood Dust</b> John Dement, Ph.D.
<b>2 Metallocenes</b> Gary P. Bond, Ph.D., DABT	<b>26 The Halogens</b> Martin D. Barrie, J.D., Ph.D., David L. Dahlstrom, CIH, FAIHA, Emily Goswami, CIH, and Rhonda Kaetzel, Ph.D., DABT	<b>49 Aliphatic Carboxylic Acids: Unsaturated</b> Maria Szilagyi, DABT	<b>70 Synthetic Polymers: Polymers, Polyethers, Polysulfones, and Other Polymers</b> Amy Benson, MS	<b>91 Cotton and Other Textile Dusts</b> James A. Merchant, MD, DrPH
<b>3 Neurotoxicology and Behavior</b> William K. Boyes, Ph.D.	<b>27 Aliphatic Hydrocarbons</b> Tania Carreño, Ph.D. and Robert L. Herrick, MS	<b>50 Ethers</b> Myron A. Mehlman, Ph.D.	<b>71 Polyurethanes, Miscellaneous Organic Polymers, and Silicones</b> Steven T. Cragg, Ph.D., DABT	<b>92 Microbial Bioaerosols in the Occupational Environment: Exposure, Detection, and Disease</b> Tiina Reponen, Ph.D. and Brett James Green, Ph.D.
<b>4 Silver and Gold</b> Alan B. G. Lansdown, Ph.D., F.R.S.C., F.S.B., F.R.C.P. Path	<b>28 Alicyclic Hydrocarbons</b> C. Stuart Baxter, Ph.D.	<b>51 Aldehydes and Acetals</b> Michael T. Borchers, Ph.D.	<b>72 Organic Sulfur Compounds</b> Howard G. Shertzer, Ph.D.	<b>93 Bloodborne Pathogens in the Workplace</b> Jagjit S. Yadav, Ph.D. and Renuka Kapoor, Ph.D.
<b>5 Beryllium</b> Laura S. Welch, MD	<b>29 Aromatic Hydrocarbons—Benzene and Other Alkylbenzenes</b> Peter F. Infante, DrPH and Eula Bingham, Ph.D.	<b>52 Acetone</b> Gunnar Johanson, DrMedSc	<b>73 Organophosphorus Pesticides</b> Jan E. Storm, Ph.D.	<b>94 Tuberculosis and Other Mycobacteria</b> Jagjit S. Yadav, Ph.D. and Renuka Kapoor, Ph.D.
<b>6 Magnesium, Calcium, Strontium, Barium, and Radium</b> Mary Beth Genter, Ph.D., DABT	<b>30 Styrene, Polyphenyls, and Related Compounds</b> C. Stuart Baxter, Ph.D. and David Warshawsky, Ph.D.	<b>53 Ketones of Four or Five Carbons</b> John L. O'Donoghue, VMD, Ph.D., DABT	<b>74 Trends in Industrial Toxicology</b> Eula Bingham, Ph.D. and Barbara Cohrsen, MS, CIH	<b>95 Pharmaceuticals</b> Daniel Acosta Jr., Ph.D.
<b>7 Zinc and Cadmium Compounds</b> Marek Jakubowski, Ph.D.	<b>31 Phenol and Phenolics</b> Finis L. Cavender, Ph.D., DABT, CIH, FAAC and John O'Donohue, Ph.D., DABT	<b>54 Ketones of Six to Thirteen Carbons</b> John L. O'Donoghue, VMD, Ph.D., DABT	<b>75 Regulations and Guidelines for Toxic Exposures in the Workplace</b> Celeste Monforton, DrPH, MPH	<b>96 Metalworking Fluids (MWF)</b> Franklin E. Mirel, Ph.D., CIH
<b>8 Mercury</b> Philippe Grandjean, MD, Ph.D. and Takashi Yorifuji, MD, Ph.D.	<b>32 Aliphatic Nitro, Nitrate, and Nitrite Compounds</b> Jerald L. Ovesen, Ph.D.	<b>55 Monohydric Alcohols: C1 to C6</b> Chris Bevan, Ph.D., DABT	<b>76 From Reactive Chemicals Control to Comprehensive Chemicals Policy: An Evolution and Opportunity</b> Joel A. Tickner, ScD	<b>97 Cold Stress: Effects on Performance and Health</b> Ingvar Holmer, Ph.D., Juhani Hassi, MD, Ph.D., Tiina M. Ikkéheimo, Ph.D., and Jouko J. Jaakkola, MD, DSc, Ph.D.
<b>9 Aluminum</b> Oyebode A. Taiwo, MD, MPH and Bernadette Storey-Laubach, MS	<b>33 N-Nitroso Compounds</b> Richard Clapp, D.Sc., MPH, Molly Jacobs, MPH, and Willie Lijinsky, Ph.D.	<b>56 Monohydric Alcohols—C7 to C18, Aromatic, and Other Alcohols</b> Chris Bevan, Ph.D., DABT	<b>77 Toxic Chemical Information Sources</b> Jessie Callaghan, BSc and Jennifer Dipper, BSc	<b>98 Heat Stress</b> Michael D. Larranaga, Ph.D., CIH, CSP, PE and Qingsheng Wang, Ph.D.
<b>10 Gallium, Indium, and Thallium</b> Guillermo Repetto, MD and Ana del Peso, Ms. Tox.	<b>34 Aliphatic and Alicyclic Amines</b> Finis L. Cavender, Ph.D., DABT, CIH, FAAC	<b>57 Esters of Mono- and Alkenyl Carboxylic Acids and Mono- and Polyalcohols</b> Kelly P. Coleman, Ph.D., DABT and William A. Toscano Jr., Ph.D.	<b>78 Pathways and Measuring Exposure to Toxic Substances</b> Morton Lippmann, Ph.D.	<b>99 Noise and Ultrasound</b> William W. Clark, Ph.D. and Jerome R. Cox, D.Sc.
<b>11 Germanium, Tin, and Copper</b> James H. Stewart, Ph.D., CIH, CSP, David Macintosh, ScD, CIH, Joseph Allen, ScD, and John McCarthy, ScD, CIH	<b>35 Aromatic Nitro and Amino Compounds</b> Eula Bingham, Ph.D. and William J. McGowan, BS	<b>58 Esters of Mono-, Di-, and Tricarboxylic Acids</b> Raymond M. David, Ph.D., DABT, Ammie N. Bachman, Ph.D., DABT, John H. Butala, MS, DABT, John T. Piper, Ph.D., and Catherine J. Shelf, MS	<b>79 Noncancer Risk Assessment: Principles and Practice in Environmental and Occupational Settings</b> Lynne T. Haber, Ph.D., DABT, Joan E. Swanson, MS, MTSC, JD, Andrew Maier, Ph.D., CIH, DABT, Irene M. Baskerville-Abrams, Ph.D., Ann Parker, BS, and Michael L. Dourson, Ph.D., DABT	<b>100 Human Health Effects of Nonionizing Electromagnetic Fields</b> David O. Carpenter, M.D.
<b>12 Lead</b> David E. Jacobs, Ph.D., CIH	<b>36 Aromatic Amino and Nitro-Amino Compounds and Their Halogenated Derivatives</b> Yin-Tak Woo, Ph.D., DABT and David Y. Lai, Ph.D., DABT	<b>59 Esters of Carbonic and Orthocarbonic Acid, Organic Phosphorous, Monocarboxylic Halogenated Acids, Haloacids, and Organic Silicon</b> William A. Toscano, Jr., Ph.D. and Kelly P. Coleman, Ph.D., DABT	<b>80 Toxicology of Flavors in the Food Industry</b> Candace L. Doepker, Ph.D., Andrew Maier, Ph.D., CIH, DABT, Alison Willis, B.S., and Steven J. Hermansky, Pharm.D., Ph.D., DABT	<b>101 Radio-Frequency and Microwave Radiation</b> R. Timothy Hitchcock, CIH, CLSO
<b>13 Titanium, Zirconium, and Hafnium</b> Barbara Malczewska-Toth, Ph.D., DABT	<b>37 Aliphatic and Aromatic Nitrogen Compounds</b> Gerald L. Kennedy Jr., MS, DABT	<b>60 Epoxy Compounds—Olefins, Aliphatic Glycidyl Ethers, and Aromatic Monoglycidyl Ethers</b> Lynn H. Pottenger, Ph.D., DABT, Darrell R. Boverhof, Ph.D., and John M. Waechter, Jr., Ph.D., DABT	<b>81 Engineered Nanomaterials</b> Michael J. Kosnett, MD, MPH and Susan Woskie, Ph.D., CIH	<b>102 Infrared, Visible, and Ultraviolet Radiation</b> David H. Sliney, Ph.D., Maurice Bitran, Ph.D., and William Murray, MS
<b>14 Arsenic, Antimony, and Bismuth</b> Bruce A. Fowler, Ph.D., Emily F. Madden, Ph.D., and Selene Chou, Ph.D.	<b>38 Alkylpyridines and Miscellaneous Organic Nitrogen Compounds</b> Gerald L. Kennedy Jr., MS, DABT	<b>61 Epoxy Compounds: Aromatic Diglycidyl Ethers, Polyglycidyl Ethers, Glycidyl Esters, and Miscellaneous Epoxy Compounds</b> Nancy Anne M. Berdasco, Ph.D., DABT and John M. Waechter Jr., Ph.D., DABT	<b>82 Silica and Silica Compounds</b> Richard A. Lemen, Ph.D., MSPH and Eula Bingham, Ph.D.	<b>103 Lasers</b> David H. Sliney, Ph.D.
<b>15 Vanadium, Niobium, and Tantalum</b> Konrad Rydzynski, M.D., Ph.D. and Daria Pakulski, Ph.D.	<b>39 Cyanides and Nitriles</b> Elizabeth J. Kopras, Ph.D.	<b>62 Organic Peroxides</b> Jon B. Reid, Ph.D., DABT and Custodio V. Muñanga, Ph.D., MPH	<b>83 Asbestos</b> Richard A. Lemen, Ph.D., MSPH and Ronald F. Dodson, Ph.D., FCCP, FAHA	<b>104 Occupational Ergonomics: Principles and Applications</b> Amit Bhattacharya, Ph.D., Nancy Talbott, MS, PT, and Laurel Kind, Ph.D.
<b>16 Chromium, Molybdenum, and Tungsten</b> Sverre Langard, MD, MSc Toxicol, Ph.D., Dominique Lison, MD, Ph.D., and Per Strand, MSc Chemistry	<b>40 Halogenated One-Carbon Compounds</b> Jon B. Reid, Ph.D., DABT and Custodio V. Muñanga, Ph.D., MPH	<b>63 Glycols</b> Finis L. Cavender, Ph.D., DABT, CIH	<b>84 Talc</b> Kenneth D. Rosenman, MD	<b>105 Health Effects from Hand-Transmitted Vibration</b> Howard J. Mason, Ph.D.
<b>17 Manganese and Rhodium</b> Tiina Santonen, MD, Ph.D. and Antero Aittio, MD, Ph.D.	<b>41 Saturated Halogenated Aliphatic Hydrocarbons Two to Four Carbons</b> Jon B. Reid, Ph.D., DABT and Custodio V. Muñanga, Ph.D., MPH	<b>64 Ethers of Ethylene Glycol and Derivatives</b> Steven T. Cragg, Ph.D., DABT	<b>85 Rock Wool and Refractory Ceramic Fibers</b> Carol Rice, Ph.D., CIH	<b>106 Abnormal Pressures: Hyperbaric and Hypobaric</b> R.W. (Bill) Hamilton, Ph.D.
<b>18 Iron and Cobalt</b> L. Faye Grimsley, Ph.D., CIH and Erica L. Harris, MSPH	<b>42 Unsaturated Halogenated Hydrocarbons</b> Fiorella Belpoggi, DBS, D. Chiozzotto, Ph.D., and M. Lauriola, Ph.D.	<b>65 Glycol Ethers: Ethers of Propylene, Butylene Glycols, and Other Glycol Derivatives</b> Steven T. Cragg, Ph.D., DABT	<b>86 Coal</b> Michael Atfield, Ph.D., Vincent Castranova, Ph.D., Eileen Kuempel, Ph.D., and Gregory Wagner, MD	<b>107 Biological Rhythms, Shift-work, and Occupational Health</b> Allene J. Scott, MD, MPH
<b>19 Nickel, Ruthenium, Rhodium, Palladium, Osmium, and Platinum</b> Slawomir Czerczak, Ph.D., Jan P. Gromiec, Ph.D., Anna Pałaszewska-Tkacz, MSc, and Anna S. 'widwin'ska-Gajewska, MSc.	<b>43 Dibenzo-p-Dioxins: 2,3,7,8-Tetrachlorodibenzo-p-Dioxin</b> Shane Que Hee, Ph.D.	<b>66 Synthetic Polymers</b> Bailus Walker, Jr., Ph.D., MPH and Lynette D. Stokes, Ph.D., MPH	<b>87 Petroleum, Coal Tar, and Related Products</b> Richard W. Niemeier, Ph.D.	<b>108 Smoke and Combustion Products</b> C. Stuart Baxter, Ph.D.
<b>20 Uranium and Thorium</b> Melissa A. McDiarmid, MD, MPH, Joanna M. Gaitens, Ph.D., RN, and Katherine S. Squibb, Ph.D.	<b>44 Halogenated Biphenyls</b> Debdas Mukerjee, Ph.D. and Patricia Ruiz, Ph.D.	<b>67 Synthetic Polymers—Olefin, Diene Elastomers, and Vinyl Halides</b> Bailus Walker, Jr., Ph.D., MPH and Lynette D. Stokes, Ph.D., MPH	<b>88 Polycyclic Aromatic Hydrocarbons and Azaaromatic Compounds</b> C. Stuart Baxter, Ph.D. and David Warshawsky, Ph.D.	<b>109 Interactions</b> C.T. De Rosa, Ph.D.
<b>21 The Lanthanides, Rare Earth Elements</b> Willard H. Wells, Jr., Ph.D., CIH and Vickie L. Wells, MS, CIH	<b>45 Halogenated Benzenes</b> A. Philip Leber, Ph.D., DABT and James S. Bus, Ph.D., DABT	<b>68 Polyvinyl Acetate, Alcohol and Derivatives, Polystyrene, and Acrylics</b> Bailus Walker, Jr., Ph.D., MPH and Lynette D. Stokes, Ph.D., MPH	<b>89 Carbon Black</b> Robert J. McCunney, MD, MPH, Henry J. Muranko, MPH, CIH, CSP, Chris M. Long, ScD, Ali K. Hamade, Ph.D., DABT, Peter A. Valberg, Ph.D., FATS, and Peter Morfeld, Ph.D.	<b>110 Occupational Chemical Carcinogenesis</b> James Huff, Ph.D. and Ronald L. Melnick, Ph.D.
<b>22 Phosphorus, Selenium, Tellurium, and Sulfur</b> Barbara Malczewska-Toth, Ph.D., DABT	<b>46 Organic Chlorofluoro Hydrocarbons</b> George M. Rusch, Ph.D., DABT, FATS			<b>Cumulative Contents, Volumes 1–6 495</b>
<b>23 Boron</b> R. Wayne Ball, Ph.D., DABT, Michael C. Harrass, Ph.D., and B. Dwight Culver, MD	<b>47 Miscellaneous Chlorinated Hydrocarbon Pesticides</b> James S. Bus, Ph.D., DABT and A. Philip Leber, Ph.D., DABT			<b>Cumulative Subject Index, Volumes 1–6 503</b>
<b>24 Alkaline Materials: Sodium, Potassium, Cesium, Rubidium, Francium, and Lithium</b> Robert Jefferson, MD				<b>Cumulative Chemical Index, Volumes 1–6 723</b>
				<b>Cumulative CAS Index, Volumes 1–6 833</b>