



John Chadwick
Aerosol Products Consultant

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Summary

- **Experience:** Over 35 years of continuous experience in the Aerosol Industry. Aerosol product types include:
 - *Household Products* - oven cleaners, polishes, insecticides, air fresheners, dusters, etc.
 - *HBA Products* - hairsprays, deodorants, mousse aerosols.
 - *Food Aerosols* - PAM cooking spray, whipped cream.
 - *Automotive Products* - lubricants, solvent sprays, de-greasers, refrigerants, etc.
 - *Medical* - foot powder, wound sprays.

- **Areas of Expertise:**
 - Aerosol Technology
 - Product Development and Propellant Systems
 - Aerosol Packaging Systems: Valves and Containers / Spray Optimization
 - Product Scale-up for Manufacturing / Aerosol Product Quality Assurance Systems
 - Aerosol Laboratory: Operation / Design / Safety Systems

ATS Technical Consulting Services

Aerosol Technology Training Programs:

- ATS offers customized on-site technical training workshops, including: Aerosol Technology 101 (newly updated, and our most popular training program), Product Quality Control, Aerosol Laboratory Operation & Safety Guidelines.
- All programs are customized to the client's needs and aerosol product lines.

Auditing Services (Aerosol Manufacturing and Laboratories):

- ATS provides site audits of aerosol manufacturing operations and aerosol laboratories. We provide a review of safety systems, procedures, and GMP's relating to the production, testing and handling of flammable products/propellants.
- A typical aerosol manufacturing site audit will consist of reviewing: tank farms, batch processing (compounding) areas, aerosol production lines, gashouses, and QA inspection areas.

Aerosol Product/Package R&D and Manufacturing Support:

- R&D: ATS partners with your technical team to provide assistance troubleshooting technical and stability issues, develop suitable aerosol packaging systems, optimize spray performance, etc.
- Manufacturing: Assist in troubleshooting product quality and production issues.

- Contract Packaging: Identify a suitable contract packager for your aerosol products. Provide technology transfer, scale-up, and auditing/validation of production lines.

Product Quality Systems & Customer Satisfaction:

- ATS can design, implement, and/or upgrade existing Aerosol Quality Systems for aerosol products.
- ATS also provides support on-site, and off-site, to address customer complaints by conducting quality non-conformance investigations (returned sample defect analysis) and will suggest solutions to problems/complaints such as “poor spray” and “can does not empty”, etc.
- Our goal is to reduce product defects and improve customer satisfaction .

Aerosol Laboratory Design and Operation:

- Site specific recommendations developed for existing, and planned, aerosol laboratories.
- This includes recommendations for aerosol filling equipment and safety systems appropriate for your needs – single can filling capability through large scale pilot plants.
- Follow-up support includes on-site training in aerosol lab operating procedures and the development of site-specific operating and safety guidelines (HAZ-OP SOP's).

Expert Witness Services:

- ATS offers product failure analysis services for product liability cases, as well as technical advice and case strategy recommendations.
- Also experienced in IP (intellectual property) and product licensing disputes involving aerosol technology.
- Mr. Chadwick has proven experience providing testimony at depositions and at trial – refer to the attached case list addendum.
- Daubert exclusions: Mr. Chadwick's testimony has never been prohibited or limited in any way.

Professional Experience

6/01 – Present: *AEROSOL TECHNICAL SOLUTIONS, LLC*, Raymond, New Hampshire.

Aerosol Products Consultant: ATS consulting services listed above.

6/99 – 6/01: *SUMMIT PACKAGING SYSTEMS*, Manchester, New Hampshire.

Technical Services Manager: Responsible for managing technical support and aerosol development programs focused to provide Marketers and Fillers with suitable valve systems to meet their aerosol dispensing needs for new and existing products. Secondary responsibilities: continually on-call to travel to customer locations to diagnose & resolve technical issues and provide technical support for customer driven development programs.

7/91 – 6/99: *AMERICAN HOME FOODS / INTERNATIONAL HOME FOODS (CONAGRA)*, Milton, Pa.

Technical Manager: (7/93 to 6/99) Direct responsibility for the Technical support and PD functions for Private Label, FoodService, PAM, Polaner, and Guldens Mustard product lines. Combined sales of managed Product Lines: \$550MM/yr. Responsible for the innovation and development of: new Aerosol Products, Canned Pasta, Condiments, and Snacks. Also, acted as the company's primary Technical Sales Representative for Private Label New Business accounts. Manage a staff of 7 professionals.

Section Head / Food Enhancements: (7/91 to 6/93) Primary responsibilities: to build a state of the art aerosol research lab, and to hire and train a group of professionals in Aerosol Technology and Aerosol Product Development. Brand Responsibility included PAM Cooking Sprays (\$85MM/yr. sales). Invented and developed a novel aerosol technology to exceed national VOC regulatory requirements for aerosol cooking sprays. A patent application was filed. Managed a staff of three (3) professionals.

1/88 - 5/91: **BRISTOL-MYERS / CLAIROL DIVISION**, Stamford, Connecticut.

Project Supervisor: (11/90 - 5/91) Responsible for the development of novel products for Clairol's consumer and professional haircare product lines. Brand responsibility included: Final Net, Clairmist, Logics and Condition. Identified and developed new resin technology for use in low/no VOC "next-generation" water based fixative products. Awarded US patent # 5,314,684.

Project Leader: (1/88 - 11/90) Developed the following product introductions: Final Net Ultimate Hold and Spritz (contains novel resin/neutralization system), Developed Clairmist Aerosol Line (six SKU's). Also responsible for the management of the aerosol filling laboratory.

7/86 - 1/88: **CHESEBROUGH-PONDS / UNILEVER CORP.**, Trumbull, Connecticut.

Senior Research Chemist: Designed and implemented development programs to evaluate new active ingredients. Developed new aerosol and liquid products for the SPECTRACIDE, RID-A-BUG and HOT SHOT insecticide lines. Coordinated joint development programs with suppliers and Universities. Provided technical support to contract packagers for the Division. Supervised manufacturing start-ups for all formula changes and new products. Trained technicians and chemists in aerosol technology. Managed a staff of three.

8/85 - 7/86: **SUMMIT PACKAGING SYSTEMS**, Manchester, New Hampshire.

Technical Service / Technical Sales Representative: Responsibilities included the development of aerosol valve systems, primarily for Midwest & East Coast accounts. Product categories included: insecticides, air fresheners, lubricants, polishes, AP's, deodorants, and colognes. Responsible for technical sales presentations and trouble-shooting production start-ups at major accounts: Boyle-Midway, SC Johnson, Faberge, Lehn & Fink, Carter-Wallace, Proctor & Gamble, Clorox, etc. Assisted sales reps in developing new business opportunities. Designed a new total release fogger actuator and worked closely with Summit's sales force to secure order commitments.

6/78 - 8/85: **AMERICAN HOME PRODUCTS CORP. / BOYLE-MIDWAY DIV.** Cranford, New Jersey.

Product Development Supervisor: (6/84 - 8/85) Primary responsibilities: to design & implement product development programs which culminated in novel aerosol insecticide products for the Black Flag product line. Conducted on-site trouble-shooting at all aerosol production locations, coordinated testing for claims support as required by the EPA and media networks. Trained junior personnel in aerosol technology. Managed four scientists and technicians. Awarded Canadian Patent #1,152,429 "Low Odor Pesticide Compositions."

Project Leader: (7/81 - 6/84) Responsible for the bench development of aerosol and non-aerosol formulations. Developed protocols for product efficacy testing, and product stability testing. Developed manufacturing directives for various aerosol, liquid and powder products. Trained and managed 3 chemists and technicians.

Chemist: (7/79 - 7/81) Extensively trained in the formulating of aerosols and emulsions. Designed o/w and w/o products with hydrocarbon and Dymel propellant systems. Other assignments included routine line maintenance

functions: monitoring stability packs, evaluation of new/alternative raw materials, and implementing cost saving programs.

Pilot Laboratory Operator: (6/78 - 7/79) Responsible for the set-up and batching of products for stability or market testing. Products included: air-freshness, food coatings, insecticides, oven cleaners, floor-waxes and lubricating oils.

Education and Professional Advancement

RUTGERS UNIVERSITY, NJ: Bachelor of Science Degree in Biology, 1978.

UNION COLLEGE, NJ: Associates Degree in Environmental Science, 1976.

PROFESSIONAL ADVANCEMENT COURSES:

Aerosol Technology	Aerosol Emulsion Technology
Food Science	Suspensions and Emulsions
DuPont DYMEL Propellants	Technology of Cosmetic Raw Materials

Publications

Controlling Particle Size in Self-Pressurized Aerosol Packages.

Metal Finishing Magazine, July/August, 2004, p40-44.

Particle Size Control in Aerosol Packages.

Spray Technology & Marketing Magazine, December 2004, p20-22.

Aerosol Anatomy – The Aerosol Laboratory.

Spray Technology & Marketing Magazine, April, 2006, p32-34.

Aerosol Anatomy – The Aerosol Laboratory (part 2).

Spray Technology & Marketing Magazine, February, 2007, p38-42.

Aerosol Anatomy – Product Litigation.

Spray Technology & Marketing Magazine, July, 2007, p12-15.

Aerosol Anatomy – Product Litigation (part 2).

Spray Technology & Marketing Magazine, October, 2007, p20-22.

Aerosol Anatomy – Stem Gaskets.

Spray Technology & Marketing Magazine, September, 2008, p22-23.

ADDENDUM

Expert Witness Case List

I have provided testimony as an expert in Aerosol Technology, Aerosol Packaging, Aerosol Propellants, and Aerosol IP litigation. My experience as an expert witness/consultant & aerosol failure analysis consultant is as follows:

July, 2015: Edgerton v Senoret Chemical / Woodstream Corporation

Retained by the defendant to provide case analysis, product failure analysis & expert witness services.
Product: Terro Aerosol Ant Spray. Deposition: 4/1016. Trial: 4/2016.
Jurisdiction: Superior Court of California, Sacramento. Case# 34-2014-00164584.

January, 2014: Ramos v MicroCare Corporation

Retained by the defendant to provide case analysis, product failure analysis & expert witness services regarding this case. Case settled: 4/2015.
Jurisdiction: US District Court Dallas County, Texas / No. DC-13-10785.

March, 2012: Marksberry v Penray Companies

Retained by the defendant as a consulting expert to provide technical advice relating to aerosol technology. Case settled 1/2013.
Jurisdiction: US District Court Southern District of Texas. No. 4:10-CV-03333.

April, 2006- 2013: Aerofil Technology, Inc (ATI)

Retained by the defendant, ATI, to provide case analysis and technical consulting regarding Stand N' Seal product liability. Deposition: 7/2008. Trial: 4/2010.
Follow-up Arbitration: Roanoke v Aerofil: Deposition: 8/2013. Arbitration Hearing: 11/2013

June, 2008: Arch Chemicals v Radiator Specialty Company

Retained by the defendant as a consulting expert to provide technical advice relating to aerosol technology.
Jurisdiction: US District Court of Oregon No. 3:07-CV-1339-HU.

July, 2007: Gilbert Miller v Sean Westgate

Retained by the plaintiff as a consulting expert to verify case facts, and provide education in aerosol technology. Product: Pro Max Paint. Settlement reached prior to trial.
Jurisdiction: Bristol (MA) Superior Court. C.A. No.: 2006-729.

October, 2006: Orta v. Hydrosol, Inc

Retained by the defendant, Hydrosol Inc., to provide case analysis, product failure analysis & expert witness services regarding this case. Deposition: 1/2008. Case settled at trial.
Jurisdiction: 79th District Court, Jim Wells County, Texas. No. 07-02-45454

January, 2005: OraSure Technologies, Inc. v. Schering-Plough Healthcare Products, Inc.

Retained by the plaintiff, OraSure Technologies, to provide analysis of competing aerosol dispensing technology, with respect to the relevant patent claims, and IP. Case involved technology analysis in the alleged patent infringement of competing aerosol products. Deposition: 9/2005. Case settled.
Jurisdiction: US District Court – Eastern Pennsylvania, case file: 04-CV-3507.

December, 2004: Pixley v. JM Products.

Retained by the defendant, JM Products, to conduct a Failure Analysis Investigation, and to review manufacturing and quality procedures to assure that the product was made in accordance with standard aerosol industry practices. Case settled.

Jurisdiction: South Carolina case file: 03-CP-32-3959.

August, 2003: Weerdmeester v. Reckitt Benckiser & Precision Valve Corporation.

Retained by the defendant, Reckitt & Benckiser, to provide Technical Consulting Services & case review. Settlement reached prior to trial.

Jurisdiction: New York Supreme Court.

July 30, 2003: Bufford v. United Industries.

Retained by the plaintiff's counsel to provide case review, expert opinions, and deposition.

Settlement reached 7/04 prior to trial. Deposition: 7/2003.

Jurisdiction: Circuit Court of Madison County, Tennessee, case file: C-01-7.

January 6, 2003: Oz Technology v. Randall Price.

Retained by the defendant to provide case review, expert opinions, trial testimony: 12/2002.

Judgment for the Defendant.

Jurisdiction: US District Court, State of Idaho, case file: CIV-97-0328-N-EJL.