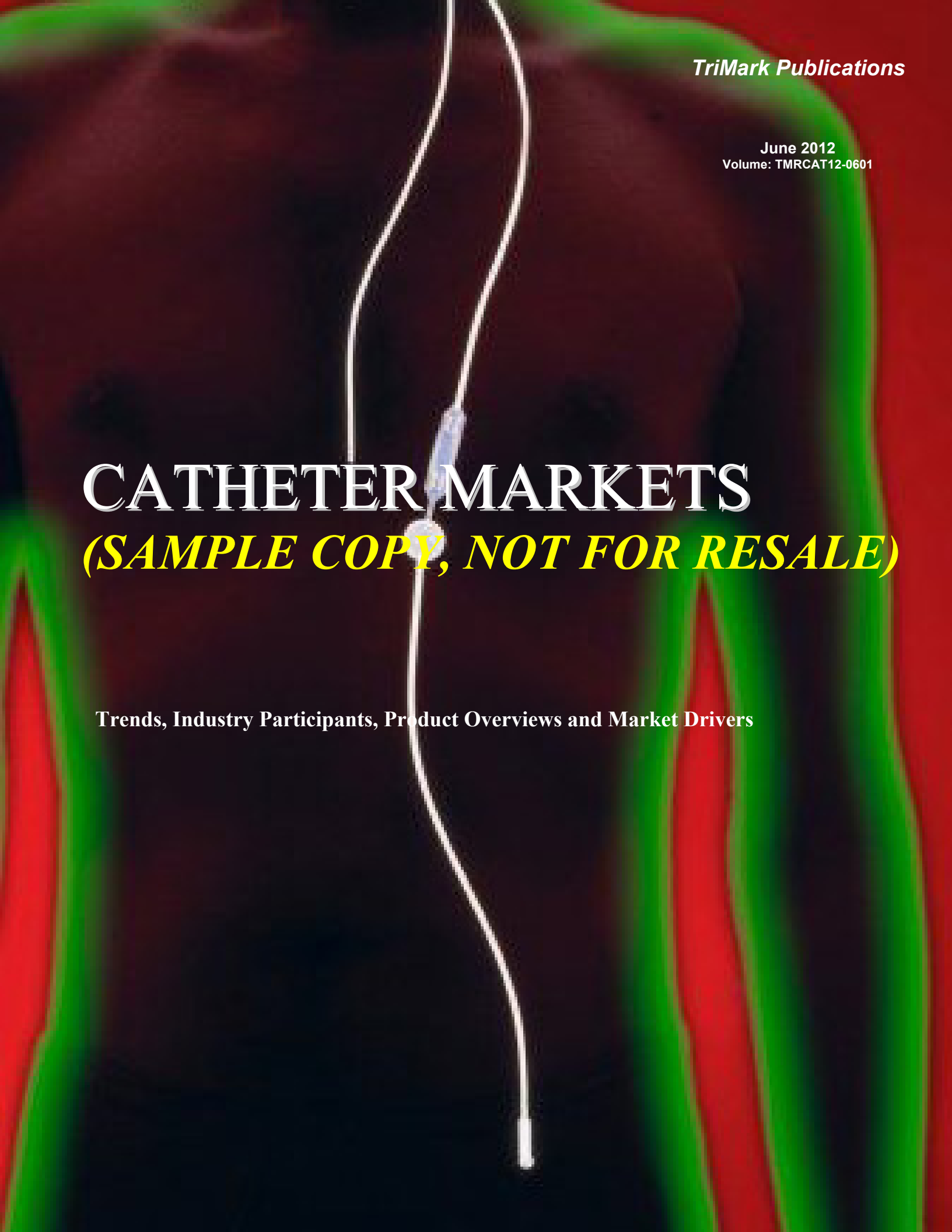

TriMark Publications

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CATHETER MARKETS

(SAMPLE COPY, NOT FOR RESALE)

Trends, Industry Participants, Product Overviews and Market Drivers

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1. Introduction

Catheters are used in a number of processes, e.g., cardiovascular, urological, intravenous, oximetry, thermodilution, suction and wound drainage processes that involve the administration or drainage of fluids from the body. The global market for catheters is vibrant and continually evolving with significant investments to improve the capabilities of existing catheters, improve safety features and identify new medical applications. The growing number of aged people undergoing diagnostic and therapeutic procedures is driving increases in catheter sales. Government regulations also play a key role, mainly in the urological catheter segment, as regulations attempt to promote fewer infections among hospitalized patients through more frequent use of catheterization. This TriMark Publications report provides a detailed analysis of the global market for catheters, including central venous catheters (CVCs), peripheral venous catheters (PVC), midline catheters (MC), hemodialysis catheters, pulmonary artery catheters, peripheral artery catheters and umbilical catheters. The study also analyzes almost all of the companies known to be marketing, manufacturing or developing catheter products in the U.S. and worldwide. Detailed tables, charts and figures are included with projected sales data by geographic region for the Americas, EMRA (Europe, the Middle East, Russia, Africa) and Asia-Pacific regions.

1.1 Scope of this Report

The report provides a thorough overview of the applications of catheters in different clinical procedures; the different types of catheters used in cardiovascular, urological, neurovascular and intravenous applications. The report also briefly discusses about the merits and demerits of the three raw materials: silicones, polyvinyl chloride and latex used in the manufacture of catheters. A section of the report deals briefly with the common disease conditions that fuel the growth of catheter market. As the catheters are medical devices, the study also discusses the overall medical device market in the U.S., Europe and Asia/Pacific. The major section of this analysis covers in detail the market for different catheter types, the market leading vendors and market trends in different geographical regions for catheters. The reader should consult other TriMark Publications reports at http://www.trimarkpublications.com for details on individual market segments related to medical devices and supplies, including TriMark's *Disposable Syringe Markets* and *Disposable Medical Supplies Markets* reports.

1.2 Methodology

The author of this report is a retired college professor with more than 30 years of experience in teaching biochemistry, biochemical pharmacology, biotechnology and molecular biology. He also has four years of experience in editing market research reports on healthcare topics. Company-specific information for this report has been obtained mainly from industry trade publications, academic journals, news and research articles, press releases and corporate websites, as well as annual reports for publicly-held firms. Additionally, sources of information include the non-governmental organizations (NGOs) such as the World Health Organization (WHO) and governmental entities like the U.S. Department of Health and Human Services (HHS) and U.S. federal agencies such as the National Institutes of Health (NIH), the Food and Drug Administration (FDA) and the Centers for Disease Control and Prevention (CDC). Where possible and practicable, the most recent data available have been used.

Some of the statistical information was taken from Biotechnology Associates' databases and from TriMark's private data stores. The information in this study was obtained from sources that we believe to be reliable, but we do not guarantee the accuracy, adequacy or completeness of any information or omission or for the results obtained by the use of such information. Key information from the business literature was used as a basis to conduct dialogue with and obtain expert opinion from market professionals regarding commercial potential and market sizes. Senior managers from major company players were interviewed for part of the information in this report.

Primary Sources

TriMark collects information from hundreds of Database Tables and many comprehensive multi-client research projects, as well as Sector Snapshots that we publish annually. We extract relevant data and analytics from TriMark's research as part of this data collection.

Secondary Sources

TriMark uses research publications, journals, magazines, newspapers, newsletters, industry reports, investment research reports, trade and industry association reports, government-affiliated trade releases and other published information as part of its secondary research materials. The information is then analyzed and translated by the Industry Research Group into a TriMark study. The Editorial Group reviews the complete package with product and market forecasts, critical industry trends, threats and opportunities, competitive strategies and market share determinations.

TriMark Publications Report, Research and Data Acquisition Structure

The general sequence of research and analysis activity prior to the publication of every report in TriMark Publications includes the following items:

- Completing an extensive secondary research effort on an important market sector, including gathering all relevant information from corporate reporting, publicly-available data and proprietary databases.
- Formulating a study outline with the assigned writer, including important items, as follows:
    - Market and product segment grouping, and evaluating their relative significance.
    - Key competitors' evaluations, including their relative positions in the business and other relevant facts to prioritize diligence levels and assist in designing a primary research strategy.
    - End-user research to evaluate analytical significance in market estimation.
    - Supply chain research and analysis to identify any factors affecting the market.
    - New technology platforms and cutting-edge applications.
- Identifying the key technology and market trends that drive or affect these markets.
- Assessing the regional significance for each product and market segment for proper emphasis of further regional/national primary and secondary research.
- Completing a confirmatory primary research assessment of the report's findings with the assistance of expert panel partners from the industry being analyzed.

1.3 Executive Summary

The global catheter market has been valued at $[redacted] in [redacted]. The key growth drivers are aging population in both developed and emerging markets, product innovations and patient's choice for minimally invasive procedures. Just as in other medical devices, U.S. is the largest market for catheters and the U.S. medical device companies produce nearly [redacted]% to [redacted]% of catheter products that are being used worldwide. Among the different types of catheters, cardiovascular catheters account for about [redacted]% of the global catheter market. The other catheters available in the global market are urological catheters, intravenous catheters, oximetry catheters, thermodilution catheters, suction catheters and wound drainage catheters. The specialty catheters, intravenous catheters and urological catheters have a share of [redacted]%, [redacted]% and [redacted]% respectively. In [redacted], North America accounted for approximately [redacted]% of the global market while Europe represented [redacted]% of the market. Asia-Pacific is the fastest growing region with a CAGR of [redacted]%. Americas as a whole accounted for a market of $[redacted] in [redacted] and this is assumed to reach $[redacted] in [redacted]. The second largest market includes the EMRA countries (Europe, Middle East, Russia and

Africa). The aging population in Europe demands all types of surgical interventions, particularly cardiovascular, orthopedic, urological and dermatological procedures and consequently account for the huge counsumption in this region. In [redacted], the countries in the EMRA region had a market for catheters valued at $[redacted] with a potential to reach $[redacted] in [redacted].

Though smaller than other regions, the Asia/Pacific market is the fastest growing one with a CAGR of [redacted]%. The market is characterized by the demand for low-cost catheters particularly in the urological sector. Dialysis catheters have relatively the largest market and the region has been experiencing a shift from hemodialysis to peritoneal catheters. The increasing incidence of coronary artery disease has contributed much to a huge demand for percutaneous transluminal coronary angioplasty (PTCA). The Asia/Pacific market for catheters in [redacted] was valued at $[redacted] and it has the potential to reach $[redacted] in [redacted]. The Japanese live longer than others, although they spend only half as much as on healthcare as Americans do, as they visit doctors more frequently. Use of intravascular ultrasound catheters is high in Japan as the physicians are interested in accurate lesion sizing. The Japanese catheter market size was for about $[redacted] in [redacted] and it is predicted to reach $[redacted] in [redacted].

Age, obesity, physical inactivity and diabetes are the major contributory factors for cardiovascular diseases. The global cardiovascular catheter market is successfully being promoted by newer and novel innovations in catheters that ensure improved maneuverability and insertion capabilities. The U.S. is the largest market for cardiovascular catheters with a share of about [redacted]%. In the U.S. EP ablation catheter market is the fastest growing one with a CAGR of [redacted]%. RF ablation catheters are gaining prominence for managing atrial fibrillation. The global cardiovascular catheter market was worth about $[redacted] and it has been predicted to reach $[redacted] in [redacted].

The various types of urological catheters available in the global market include urological catheters, urethral catheters, balloon retention type catheters, straight catheters, upper urinary tract catheters etc. The urological catheters category includes [redacted] approved products from [redacted] different companies. Increasing incidence of urological problems in the global aging population is understood to be the market driver. From the value of $[redacted] in [redacted], this market has the potential to reach $[redacted] in [redacted]. The total market value for the different kins of urological products was about $[redacted] in [redacted] and the urinary incontinence products had the largest share of about $[redacted].

The past few decades have witnessed an increased growth of central venous access devices. Nearly about [redacted] central venous catheters per year are used in the U.S. We estimate that the market for CVC was worth about $[redacted] in [redacted] and expect this to grow and reach $[redacted] in [redacted]. The U.S., Europe and Japan accounted for nearly [redacted]% of the global central intravenous catheter market, with the U.S. alone accounting for [redacted]%.

Tissue ablation devices are used to produce a therapeutic affect on tissue, by its destruction, excision, sealing or simply the formation of a clinically beneficial lesion. The tissue ablation market has a vast potential for growth and the application of these devices encompass the entire clinical range in medical and surgical technology. The technologies that include ablation embrace nine distinct categories: electrical, radiation, light, radiofrequency, ultrasound, cryotherapy, thermal (other than cryotherapy), microwave and hydromechanical. Together all these devices had a market for about $[redacted] in [redacted].

