IONICS INC Form S-3 January 20, 2004

> As filed with the Securities and Exchange Commission on January 20, 2004 Registration No. ___

> > SECURITIES AND EXCHANGE COMMISSION Washington, DC 20549

FORM S-3 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

Ionics, Incorporated (Exact name of Registrant as specified in its charter)

Massachusetts (State or other jurisdiction of incorporation or organization)

04-2068530 (I.R.S. Employer Identification Number)

65 Grove Street Watertown, MA 02472-2882 (617) 926-2500

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

> Douglas R. Brown President and Chief Executive Officer Ionics, Incorporated 65 Grove Street Watertown, MA 02472-2882(617) 926-2500

(Name, address, including zip code, and telephone number, including area code, of agent for service) ______

Copies of all communications, including all communications sent to the agent for service, should be sent to:

Stephen Korn, Esq. Vice President and General Counsel Testa, Hurwitz & Thibeault, LLP Ionics, Incorporated 65 Grove Street Watertown, MA 02472-2882 (617) 673-4450

Mark H. Burnett, Esq. 125 High Street Boston, Massachusetts 02110 (617) 248-7000

Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective. If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering

pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following.

CALCULATION OF REGISTRATION FEE

Title of Shares to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	 F Ag
Common Stock, \$1.00 par value per share (and associated common stock purchase rights) (2)	4,905,660	\$30.12	\$147 ,

(1) The number of shares of Ionics common stock being registered hereunder represents the maximum aggregate number of shares of Ionics common stock issuable to the selling stockholders pursuant to the purchase agreement dated as of November 18, 2003, by and among Ionics, Incorporated and the owners of Ecolochem Inc., and its affiliated companies. The final apportionment of such shares among the selling stockholders has not yet been determined. The actual number of shares issued to the selling stockholders will be set forth in a final prospectus filed pursuant to Rule 424(b). Pursuant to Rule 416 under the

Securities Act of 1933, as amended, this prospectus will also cover an indeterminable number of additional shares of common stock that may be issued to prevent dilution resulting from stock splits, stock dividends or similar transactions affecting the shares to be offered by the selling stockholders. (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457 under the Securities Act of 1933. Pursuant to Rule 457(c) under the Securities Act of 1933, the registration fee has been calculated based upon the average of the high and low prices per share of the common stock of Ionics, Incorporated on the New York Stock Exchange on January 16, 2004. The common stock purchase rights that accompany the common stock are issued without further consideration.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to Section 8(a), may determine

EXPLANATORY STATEMENT

Ionics, Incorporated and the owners of the outstanding equity interests of Ecolochem, Inc., Ecolochem International, Inc., Moson Holdings, LLC, and

Ecolochem S.A.R.L. (collectively, the "Ecolochem Group") have entered into the Purchase Agreement (referred to in this registration statement as the "purchase agreement") dated as of November 18, 2003, pursuant to which Ionics will acquire the Ecolochem Group.

The 4,905,660 shares registered for resale pursuant to this registration statement and the prospectus included in this registration statement represent the maximum aggregate number of shares of Ionics common stock to be issued in connection with the acquisition. The final determination of the number of shares of Ionics common stock to be apportioned among the stockholders of Ecolochem, Inc. and Ecolochem International, Inc. will be determined at the closing of Ionics' acquisition of the Ecolochem Group. The actual number of shares issued to the selling stockholders will be set forth in a final prospectus filed pursuant to Rule 424(b).

Certain statements in the prospectus included in this registration statement assume completion of the acquisition of the Ecolochem Group by Ionics. There can be no assurance, however, that the acquisition will be completed, or if it is completed, when the closing of the acquisition will occur.

Subject to completion, dated January 20, 2004.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THE SECURITIES REGISTERED HEREUNDER MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL SECURITIES, AND IT IS NOT SOLICITING OFFERS TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

PROSPECTUS

IONICS, Incorporated

4,905,660 Shares

Common Stock

This prospectus relates to 4,905,660 shares of our common stock held by the selling stockholders. We will not receive any proceeds from the sale of these shares by the selling stockholders. We have agreed to bear substantially all of the expenses in connection with the registration and resale of the shares (other than selling commissions and fees).

The selling stockholders include Lyman B. Dickerson; Douglas G. Dickerson; The Estate of Richard C. Dickerson; The Lyman B. Dickerson Revocable Trust Dated September 9, 1996 or any Successor Trustee, as amended; The Richard Dickerson Revocable Trust Dated March 5, 1993, or any Successor Trustee, as amended; The Douglas G. Dickerson Revocable Trust Dated June 22, 1988, or any Successor Trustee, as amended; The Lyman Dickerson Irrevocable Trust, dated July 1, 2001; The Richard Dickerson Irrevocable Trust No. 3, dated July 1, 1991; and The Douglas Dickerson Irrevocable Trust No. 3, dated July 1, 1991 and certain of their permitted transferees. The selling stockholders will acquire the offered shares directly from Ionics upon the consummation of Ionics' acquisition of Ecolochem, Inc. and its affiliated companies. The selling stockholders, or their permitted transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices.

Our common stock is traded on the New York Stock Exchange under the symbol "ION." On January 16, 2004, the closing sale price of our common stock on the New York Stock Exchange was \$30.08 per share.

Investing in our common stock involves risk.

See "Risk Factors" beginning on page 1.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Prospective investors should rely only on the information contained in this prospectus or information specifically incorporated by reference in this prospectus. We have not authorized anyone to provide prospective investors with information that is different.

Neither the delivery of this prospectus, nor any sale of the shares, shall create any implication that the information in this prospectus is correct after the date hereof.

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IONICS, INCORPORATED

We are a leading water purification company engaged worldwide in the supply of water and related activities and the supply of water treatment equipment through the use of proprietary separations technologies and systems. Our products and services are used by us or our customers to desalt brackish water and seawater, recycle and reclaim process water and wastewater, treat water in the home, manufacture and supply water treatment chemicals and ultrapure water, process food products and recycle and measure levels of waterborne contaminants and pollutants. Our customers include industrial companies, consumers, municipalities and other governmental entities, and

utilities.

Ionics was incorporated in Massachusetts in 1948. Our principal executive offices are located at 65 Grove Street, Watertown, Massachusetts 02472 and our telephone number is (617) 926-2500.

RISK FACTORS

You should carefully consider the risks described below before you decide to buy our common stock. The risks and uncertainties described below are not the only ones facing our company. Additional risks and uncertainties may also impair our business operations. In evaluating our business and before you decide to buy our common stock, you should consider carefully the following risks, in addition to the other information contained in this prospectus and the other documents incorporated by reference into this prospectus. If any of the following risks actually occur, our business, financial condition or results of operations would likely suffer. In such case, the trading price of our common stock could decline, and you may lose all or part of the money you paid to buy our common stock.

Our results of operations may fluctuate significantly on a quarterly basis.

Our quarterly operating results may vary significantly from quarter to quarter, depending on a number of factors including:

- o the introduction and market acceptance of new products and new variations of existing products;
- o the activities of competitors;
- o our ability to control expenses;
- o variations in the timing of orders and subsequent shipments;
- o length of approval processes or market tests;
- o changes in our mix of products;
- o disruption in our sources of supply;
- o personnel changes;
- o changes in our capital spending;
- o unforeseeable or unavoidable delays in large-scale customer projects;
- o higher interest rates; and
- o general economic conditions.

The market value of the shares of our common stock issuable in connection with the acquisition of the Ecolochem Group may increase prior to the closing of the acquisition and, therefore, we may be perceived to have paid more for the Ecolochem Group.

The number of shares of our common stock issuable pursuant to the acquisition was fixed at the time of the signing of the purchase agreement with the owners of the Ecolochem Group and is not subject to adjustment based on changes in the trading price of our common stock before the closing of the acquisition. Therefore, the market value of the shares of our common stock

issued in connection with the acquisition will likely fluctuate through the closing of the acquisition and thereafter. As a result, the value of the acquisition, as reflected in the relative market price of our common stock, may vary significantly from the date of execution of the purchase agreement and the date the acquisition is completed. This variance may arise due to, among other things: changes in our business, operations and prospects; market assessments of the likelihood that the acquisition will be completed; demand for water processing in our markets; and interest rates, general market and economic conditions and other factors. Substantially all of these factors are beyond our control. As a result of increases in the market price of our common stock, financial or industry analysts or others may perceive that we paid more for the

Ecolochem Group than they believe was prudent. If this perception materializes, the trading price of our common stock could be adversely affected.

The anticipated benefits of acquiring Ecolochem, Inc. and its affiliated companies (the "Ecolochem Group") may not be realized.

We agreed to acquire the Ecolochem Group with the expectation that the acquisition would result in various benefits including, among other things, enhanced revenue, profits, market presence, cost savings and operating efficiencies. We expect that the acquisition will enhance our position in the water treatment services market through the combination of our technologies, products, services and customer contacts with those of the Ecolochem Group, and will enable us to broaden our customer base in the electric power and petrochemical industries. If our business or the Ecolochem Group's business fails to meet the demands of the marketplace, customer acceptance of our products and services could decline, which would have an adverse effect on our results of operations and financial condition. We may not realize any of these benefits and the acquisition may result in the deterioration or loss of significant business. Costs incurred and potential liabilities assumed in connection with the acquisition, including pending and threatened disputes, litigation and environmental liabilities, could have a material adverse effect on our business, financial condition and operating results.

In addition, we may not achieve the anticipated benefits as rapidly as, or to the extent, anticipated by certain financial or industry analysts, or other analysts may not perceive the same benefits to the acquisition as we do. If these risks materialize, our stock price could be adversely affected.

Our restructuring program may not result in the intended financial performance improvements.

On September 3, 2003, we announced a restructuring program intended to improve our financial performance through a realignment of our management structure, a reduction in personnel, and the consolidation of certain operations. The program when fully carried out would result in the elimination of approximately 200 positions, or approximately 10% of our workforce, and is anticipated to result in annual personnel cost savings of approximately \$14 million and annual facilities cost savings of approximately \$1.4 million. In connection with the restructuring program, we anticipate incurring charges for severance costs, facilities shutdown and relocation costs, and reporting process improvement costs totaling approximately \$11 million, as well as goodwill impairment and other long-lived asset impairment charges.

A number of the planned restructuring actions have been taken, and others have yet to be implemented. We may not be able to complete the implementation of the restructuring program to the extent and according to the timetable presently expected. The cost savings we realize from the restructuring may be less than anticipated, and the overall restructuring charges we incur may be greater than anticipated. Consequently, the overall impact of the restructuring on our profitability may differ from our original estimate.

We may have difficulty and incur substantial costs integrating the Ecolochem $\mbox{\rm Group.}$

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Integrating the Ecolochem Group will be a complex, time-consuming and expensive process. Before the acquisition of Ecolochem Group, Ionics and the Ecolochem Group operated independently, each with its own business, products,

customers, employees, culture and systems, including data management and financial systems. Additionally, we are currently in the process of restructuring our business and operations. We may face substantial difficulties, costs and delays in integrating the Ecolochem Group, which may include:

- o perceived adverse changes in product or service offerings or customer service standards, whether or not these changes do, in fact, occur;
- o costs and delays in implementing common information and other systems and procedures and costs and delays caused by communication difficulties;
- o potential difficulty in applying our accounting controls and procedures to the members of the Ecolochem Group, which have operated as independent private companies;
- o charges to earnings resulting from the application of purchase accounting to the acquisition;
- o diversion of management resources;
- o potential incompatibility of business cultures;
- o potential losses of management and other key employees due to perceived uncertainty in career opportunities, compensation levels and benefits;
- o the retention of existing customers of each company;
- o reduction or loss of customer orders due to the potential for market confusion, hesitation and delay; and
- o coordinating infrastructure operations in a rapid and efficient manner.

After the acquisition, we will seek to combine certain operations and functions using common information and communication systems, operating procedures, financial controls and human resource practices, including training, professional development and benefit programs. We may be unsuccessful, or experience delays, in implementing the integration of these systems and processes.

Any one or all of these factors may cause increased operating costs, worse than anticipated financial performance or the loss of customers and employees. Many of these factors are outside our control. The failure to timely and efficiently integrate the Ecolochem Group could have a material adverse effect on our business, financial condition and operating results. In addition, the differences between the business cultures could present significant obstacles to timely, cost-effective integration of the Ecolochem Group.

We may have difficulty establishing appropriate controls and procedures on a timely basis with respect to the Ecolochem Group's financial reporting as our subsidiaries.

We have been implementing a number of measures and procedures to ensure that our disclosure controls and procedures and internal controls over financial reporting are effective. The acquisition of the Ecolochem Group will add significant business units to our operations, which, prior to the acquisition, were operated as private businesses and were not subject to the various reporting obligations imposed on publicly traded companies. We will be required to establish appropriate controls and procedures in accordance with our policies and procedures with respect to the Ecolochem Group's financial reporting. Failure to establish those controls and procedures in a timely manner, or any failure of those controls and procedures once established, could adversely impact our public disclosures regarding our business, financial condition or

operating results, which may adversely impact the price of our common stock.

The debt we will incur in connection with the acquisition of the Ecolochem Group will create financial and operating risks that could limit our operating flexibility and growth.

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As a result of the acquisition of the Ecolochem Group, we will incur substantial additional debt. We expect that the terms of the new credit facilities will contain provisions that limit our ability to incur additional indebtedness in the future and place other restrictions on our business. We may not be able to repay any current or future debt on a timely basis, depending on our future operating results. We will be required to devote increased amounts of our cash flow to service indebtedness incurred in connection with the acquisition or incurred in the future. This could require us to modify, delay or abandon our capital expenditures and other investments necessary to implement our business plan.

A portion of this debt, as well as other short-term and long-term borrowings, will be subject to variable interest rates tied to prime rates or other indices. We will be subject to the risk that interest rates may increase significantly and increase the cost of our debt.

The success of our strategic plan to grow sales and develop relationships internationally may be limited by risks related to conducting business in international markets.

Although both Ionics and the Ecolochem Group have experience marketing and distributing their products and services and developing strategic relations in Europe and other foreign markets, part of our strategy will be to increase sales and build additional relationships in Europe and other foreign markets. Risks inherent in marketing, selling and developing relationships in European and other foreign markets include those associated with:

- o Economic conditions in those markets, including fluctuations in the relative values of the U.S. dollar and foreign currencies;
- o Taxes and fees imposed by foreign governments that may increase the cost of products and services; and
- o Laws and regulations imposed by individual countries and by the European Union and other governmental bodies.

We have only limited protection for our proprietary technology.

We rely on a combination of patent, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. Our success depends in part on our ability to obtain new patents and licenses and to preserve other intellectual property rights covering our products. We intend to continue to seek patents on our inventions when appropriate. The process of seeking patent protection can be time consuming and expensive and we cannot assure you that any new patent applications will be approved, that any patents that may issue will protect our intellectual property or that any issued patents will not be challenged by third parties or will be sufficient in scope or strength to provide meaningful protection or any commercial advantage to us. Other parties may independently develop similar or competing technology or design around any patents that may be issued to us. We cannot be certain that the steps we have taken will prevent the misappropriation of our intellectual property, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States.

We may become subject to infringement claims.

Although we do not believe that our products infringe the proprietary rights of any third parties, we have in the past been subject to infringement claims and third parties might assert infringement claims against us or our customers in the future. Furthermore, we may initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. Litigation, either as plaintiff or defendant, would cause us to incur substantial costs and divert management resources from productive tasks. Any litigation, regardless of the outcome, could harm our business.

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If it appears necessary or desirable, we may seek licenses to intellectual property that we are allegedly infringing. We may not be able to obtain licenses on acceptable terms. The failure to obtain necessary licenses or other rights could harm our business.

We have many competitors and we may not be able to compete effectively.

We experience competition from a variety of sources with respect to virtually all of our products, although we do not know of any single entity that competes with us across the full range of our products, systems and services. Competition in the markets that we serve is based on a number of factors, including price, technology, applications experience, know-how, availability of financing, reputation, product warranties, reliability, service and distribution. Many of our current and potential competitors have greater name recognition and substantially greater financial, marketing and other resources than we do. These greater resources could, for example, allow our competitors to develop technology, products and services superior to our own. As a result, we may not be able to compete effectively with current or future competitors.

We may not be able to develop the new products or acquire the rights to new products necessary to remain competitive.

The water purification industry is characterized by ongoing technological developments and changing customer requirements. As a result, our success and continued growth depend, in part, on our ability to develop or acquire rights to and successfully introduce into the marketplace enhancements of existing products or new products that incorporate technological advances, meet customer requirements and respond to products developed by our competition. There can be no assurance that we will be successful in developing or acquiring such rights to products on a timely basis or that such products will adequately address the changing needs of the marketplace.

We may not be able to adapt to changes in technology and government regulation fast enough to remain competitive.

The water purification industry is characterized by changing technology, competitively imposed process standards and regulatory requirements, each of which influences the demand for our products and services. Changes in legislative, regulatory or industrial requirements may render certain of our purification products and processes obsolete. Acceptance of new products may also be affected by the adoption of new government regulations requiring stricter standards. Our ability to anticipate changes in technology and regulatory standards and to develop and introduce new and enhanced products successfully on a timely basis will be a significant factor in our ability to grow and to remain competitive. There can be no assurance that we will be able to achieve the technological advances that may be necessary for us to remain competitive or that certain of our products will not become obsolete. In

addition, we are subject to the risks generally associated with new product introductions and applications, including lack of market acceptance, delays in development, or failure of products to operate properly.

A portion of our sales is dependent upon our customers' spending cycles for capital equipment.

The sale of capital equipment within the water purification industry is cyclical and influenced by various economic factors including interest rates and general fluctuations of the business cycle. Our Equipment Business Group and our Ultrapure Water Group each derive a significant portion of its revenue from the sale of capital equipment. While we sell capital equipment to customers in diverse industries and in domestic and international markets, cyclicality of capital equipment sales and general economic conditions could have an adverse effect on our revenues and profitability.

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The acquisition of the Ecolochem Group may result in a loss of customers, strategic partners and suppliers.

The acquisition of the Ecolochem Group may have the effect of disrupting customer relationships. Some of our customers or potential customers and those of the Ecolochem Group may delay or alter buying patterns as they evaluate the likelihood of successful integration of the Ecolochem Group's business following the acquisition. Other customers may seek alternative sources of products or services due to, among other reasons, a desire not to do business with us or perceived concerns that we may not continue to support certain products or services. In addition, by increasing the breadth of our business, the acquisition may make it more difficult for us to enter into relationships with customers and strategic partners, some of whom may view us as a more direct competitor than we were prior to the acquisition. Therefore, we could experience some customer attrition as a result of the acquisition.

In addition, certain customers of the Ecolochem Group have the right to terminate their agreements with the Ecolochem Group as a result of the acquisition. Some or all of those customers may exercise that right, resulting in the loss of related revenue and profits. The indemnification obligations of the owners of the Ecolochem Group with respect to any such terminations may not fully compensate us for the loss of those customers or the related revenue and profit.

Difficulties in integrating operations could also result in the loss of strategic partners and suppliers and potential disputes or litigation with customers, strategic partners, suppliers, resellers or others. There can be no assurance that any steps by management to counter such potential increased customer, strategic partner or supplier attrition will be effective.

Failure by management to control customer, strategic partner and supplier attrition could have a material adverse effect on our business, financial condition and operating results.

The results of operations of the Ecolochem Group tend to fluctuate because of the weather conditions that affect its customers.

Demand for the mobile water treatment services offered by the Ecolochem Group tends to increase during periods of severe hot or cold weather resulting in increased revenues and earnings. The absence of severe weather may adversely impact the revenue and operating results of the Ecolochem Group.

We must comply with significant environmental regulations, which can be

difficult and expensive.

We are subject to a variety of federal, state and local governmental regulations related to the use, storage, discharge and disposal of toxic, volatile or otherwise hazardous chemicals used in our manufacturing processes. Although we believe that our activities conform to presently applicable environmental regulations, the failure to comply with present or future regulations could result in fines being imposed on us, suspension of production or a cessation of operations. Any failure by us to control the use of, or adequately restrict the discharge of, hazardous substances, or otherwise comply with environmental regulations, could subject us to significant future liabilities. In addition, we cannot assure you that past use or disposal of environmentally sensitive materials in conformity with then existing environmental laws and regulations will not result in remediation or other significant liabilities under current or future environmental laws or regulations.

We depend on key personnel, the loss of whom could harm our business.

We have been and are presently dependent upon the continued efforts of our senior management team, including Douglas R. Brown, our President and Chief

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Executive Officer. The loss of the services of Mr. Brown or any other members of our senior management team could have a material adverse effect on our ability to achieve our objectives. We will enter into an employment agreement with Mr. Lyman Dickerson, the President of Ecolochem, Inc., with the intent of providing Mr. Dickerson with sufficient incentive to remain employed by us. However, it cannot be assured that he will remain employed with us.

The loss of our key personnel, including those of the Ecolochem Group, could adversely affect our ability to manage our business. We believe that the continued service of our executive officers and the executive officers of the Ecolochem Group will be important to our future growth and competitiveness. Our employees and those of the Ecolochem Group are entitled to voluntarily terminate their relationship with us or with the Ecolochem Group, typically without any, or with only minimal, advance notice. The process of finding additional trained personnel to carry out our strategy could be lengthy, costly and disruptive. We might not be able to retain the services of all of our or the Ecolochem Group's key employees or a sufficient number of them to execute our plans. In addition, we might not be able to continue to attract new employees as required.

The loss of the services of any member of our or the Ecolochem Group's management team, or of any other key employee, could divert management's time and attention, increase our expenses and adversely affect our ability to conduct our business efficiently.

If we are unable to continue to hire and retain skilled technical and scientific personnel, then we will have trouble developing products.

Our success depends largely upon the continued service of our management and scientific staff and our ability to attract, retain and motivate highly skilled scientific, management and marketing personnel. We face significant competition for such personnel from other companies, research and academic institutions, government and other organizations who may better be able to attract such personnel. The loss of key personnel or our inability to hire and retain personnel who have technical and scientific backgrounds could materially adversely affect our product development efforts and our business.

If certain intangible assets acquired in the acquisition of the Ecolochem Group subsequently become impaired, we may be required to write off, or reduce the value of, those intangible assets, which would adversely impact our financial results during the periods in which they occur.

We currently expect to record approximately \$183.8 million of goodwill and \$73 million of other intangible assets in connection with the acquisition of the Ecolochem Group. Goodwill associated with the acquisition will be required to be tested at least annually for impairment. Other intangible assets will be amortized over their estimated useful lives. If the goodwill or other intangible assets are deemed to be impaired in the future, we will be required to reduce the value of those assets or to write them off completely, which would reduce our reported financial results during the periods in which such determination is made. If we are required to write down or write off all or a portion of those assets, or if financial analysts or investors believe we may be required to take such action in the future, the prices at which our common stock trades may be adversely affected.

We may not derive any income tax benefits from the tax election which we currently intend to make.

We may elect to make, with the former shareholders of Ecolochem, Inc. and Ecolochem International, Inc., an election under Section 338(h)(10) of the Internal Revenue Code of 1986, as amended (the "Code"), with respect to the acquisition of Ecolochem, Inc., Ecolochem International, Inc. or both. If a valid election is made under Section 338(h)(10) of the Code, we will generally be able to treat the acquisition of the stock of any company with respect to which such election is made as if new subsidiaries of ours had acquired the assets of such company in a taxable transaction for federal income tax purposes, and, as a result, after the acquisition, the assets of such company will have a tax basis generally equal to the cash and other property paid by us for such

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company plus any liabilities of such company that are assumed in the transaction.

The principal tax advantage of making an election under Section 338(h)(10) of the Code is that our new subsidiary or subsidiaries, as the case may be, will be able to depreciate or amortize the new federal income tax basis of depreciable or amortizable assets over time periods specified in the Code. For intangible assets, that time period is generally 15 years.

We may not be eligible to make an election under Section 338(h)(10) of the Code with respect to Ecolochem, Inc., Ecolochem International, Inc. or both. Currently, we intend to make an election under Section 338(h)(10) of the Code only with respect to Ecolochem, Inc., but we may conclude to make an election under Section 338(h)(10) of the Code with respect to Ecolochem International, Inc. as well. Furthermore, even if a valid election under Section 338(h)(10) of the Code is made, the depreciation and amortization deductions with respect to certain assets acquired from the Ecolochem Group may not be available to us. As a result, your decision to buy our common stock should not be based on any tax benefits associated with such an election or on any other tax benefits associated with the acquisition.

If we make an election under Section 338(h)(10) of the Code, we will be required to pay additional amounts to certain of the former owners of the Ecolochem Group. These amounts will be significant.

Following the closing of the acquisition of the Ecolochem Group, we will be

subject to significant influence by the former owners of the Ecolochem Group.

Following the closing of the acquisition, the former owners of the Ecolochem Group will beneficially own approximately 20% of our common stock. As a result, they have a strong influence on matters requiring approval by our stockholders, such as the election of directors and most corporate actions, including mergers and acquisitions. In addition, the former owners of the Ecolochem Group will be entitled to designate two members of our Board of Directors. These directors will have the opportunity to participate in all matters brought before the Board of Directors. Moreover, Mr. Lyman Dickerson, the President of Ecolochem, Inc., will have the opportunity to become the Chairman of our Board of Directors pursuant to the terms of the Stockholders Agreement to be entered into in connection with the acquisition of the Ecolochem Group. Collectively, these arrangements will allow the former owners of the Ecolochem Group to have significant participation in matters affecting us.

Future sales of our common stock by the former owners of the Ecolochem Group could depress the market price of our common stock.

While the former owners of the Ecolochem Group will be subject to restrictions on their ability to resell a portion of the shares of common stock issued to them in connection with our acquisition of the Ecolochem Group during the six months following the closing of the acquisition, they will be entitled to dispose of a significant number of shares in the public market, which could cause the market price of our common stock to decrease significantly. All of the former owners of the Ecolochem Group are required to enter into an agreement under which they agree not to sell more than 10% of the shares of common stock issuable to them in the acquisition for a period of six months following the closing of the acquisition, subject to certain exceptions. Such restrictions will lapse six months after the closing of the acquisition and the former owners of the Ecolochem Group will then have no limitations on the number of shares they can sell in the public market. If such persons sell a significant number of shares of the common stock in the open market, our stock price could decline.

Substantial expenses will be incurred and payments made even if the acquisition of the Ecolochem Group is not completed.

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The acquisition may not be completed. Whether or not the acquisition is completed, we will incur substantial expenses in pursuing the acquisition, including:

- o Financial advisory fees (certain of which are conditioned upon the consummation of the acquisition) and expenses;
- o Fees and expenses incurred in connection with the proposed financing of the acquisition; and
- o Costs and expenses for services provided by our lawyers, accountants and other advisors.

If the acquisition is completed, the transaction costs and expenses attributable to advisory, legal and accounting services incurred by us will be capitalized as a component of the purchase price.

We expect to charge certain other transaction costs and expenses during the periods in which they are incurred, which will reduce earnings or increase losses during those periods. We might not be able to manage these acquisition-related costs effectively, and they could be higher than are currently estimated. If these costs are not managed effectively, our business

operations, financial results and stock price could be adversely affected.

The costs and expenses we incur in connection with the acquisition, other than certain fees payable to our financial advisor, must be paid even if the acquisition is not completed. If the acquisition is not completed, these expenses will reduce earnings or increase losses during the period in which it is determined the acquisition will not be completed. In addition, under certain circumstances if the acquisition is not completed, we may be required to pay a termination fee of up to \$13.2 million or in other instances to pay the reasonable costs and expenses of the owners of the Ecolochem Group of up to a maximum of \$4.5 million.

Failure to complete the acquisition could cause our stock price to decline.

If the acquisition is not completed for any reason, our stock price may decline to the extent that the current market price reflects a market assumption that the acquisition will be completed or the market's perceptions why the acquisition was not consummated. In addition, our stock price may decline because costs related to the acquisition, such as legal, accounting and certain financial advisor fees, must be paid even if the acquisition is not completed, adversely affecting our earnings during the period for which such costs are recognized.

Failure of any of the members of the Ecolochem Group to be a "pass-through" entity for United States federal and other tax purposes could increase our cost of the cost of the acquisition.

The owners of the Ecolochem Group have represented in the purchase agreement that each of the members of the Ecolochem Group is a "pass-through" entity for United States federal income tax purposes. Specifically, the owners of the Ecolochem Group have represented that each of Ecolochem and Ecolochem International, Inc. is a "Subchapter S Corporation" under the Code, and that each of Moson Holdings, LLC and Ecolochem S.A.R.L. is treated as a "partnership" under the Code for federal tax purposes. Accordingly, except in limited circumstances, the Ecolochem Group does not, and has not for a substantial period, paid income taxes at the entity level either to the United States or to many state and local jurisdictions (with certain exceptions). If it were ultimately determined that any member of the Ecolochem Group was not a valid pass-through entity for tax purposes, that entity could be subject to tax, penalties, additions to tax and interest for prior periods. The owners of the Ecolochem Group are required to indemnify us for any taxes attributable to periods prior to the acquisition, but there can be no assurance that any such amount will actually be paid. Any significant tax, penalties, additions to tax and interest for prior periods which we pay and for which we are not indemnified

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by the owners of the Ecolochem Group could have a material adverse effect on our business, financial condition and operating results.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

Certain statements and assumptions contained, or incorporated by reference, in this prospectus constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements include those that predict, forecast, indicate or imply future results, performance or achievements.

Any statements contained in this prospectus, including statements to

the effect that Ionics or its management "believes," "expects," "anticipates," "plans," "may," "will," "projects," "continues," or "estimates" or statements concerning "potential" or "opportunity" or other variations thereof or comparable terminology or the negative thereof, that are not statements of historical fact should be considered forward-looking statements.

These forward-looking statements are based on current views and assumptions and are neither promises nor guarantees but are subject to risks, uncertainties and other factors that could cause actual results to differ materially from current expectations as described in such forward-looking statements. In connection with the forward-looking statements appearing in this prospectus, you should carefully consider the matters discussed under the caption "Risk Factors" beginning on page 1, and the other risk factors described in Ionics' filings with the SEC, including its Proxy Statement dated January 9, 2004 and its Annual Report on Form 10-K for the year ended December 31, 2002, as amended. We do not assume any obligation to update any forward-looking statement we make, except as required by law.

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USE OF PROCEEDS

We will not receive any of the proceeds from the sale of our common stock by the selling stockholders. The selling stockholders will receive all of the net proceeds from any sale of the shares of common stock being sold by the selling stockholders pursuant to this prospectus.

The selling stockholders will pay any underwriting discounts and commissions, all transfer taxes, and all expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services (except that we have agreed to pay the fees and disbursements of one law firm representing the selling stockholders on behalf of the selling stockholders) or any other expenses incurred by the selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, New York Stock Exchange listing fees and fees and expenses of our counsel, and fees and expenses of one counsel to the selling stockholders and our accountants.

SELLING STOCKHOLDERS

The following table sets forth, to our knowledge, the name and number of shares of our common stock beneficially owned by each of the selling stockholders as of the consummation of our acquisition of Ecolochem, Inc. and its affiliated companies. Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission, and includes voting or investment power with respect to shares. Unless otherwise indicated below, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock and except as set forth in the footnotes to the table. The inclusion of any shares in this table does not constitute an admission of beneficial ownership for the person or trust named below. The table has been prepared on the basis of information furnished to us by or on behalf of the selling stockholders. As of January 14, 2004, there were approximately 17,903,386 shares of our common stock outstanding.

Shares of Common Stock
Beneficially
Owned Prior to
Offering(1)

Ow

Sha

V.

Number of Shares of Common Stock Being Offered Pursuant to this Prospectus(2)

Name of Selling Stockholder

Number Percent

Lyman B. Dickerson(3)
Douglas G. Dickerson(4)
The Estate of Richard C. Dickerson(5)
The Richard Dickerson Revocable Trust Dated
March 5, 1993, or any Successor Trustee,
as amended (6)
The Lyman Dickerson Irrevocable Trust, dated
July 1, 2001 (7)
The Douglas Dickerson Irrevocable Trust No.
3, dated July 1, 1991 (8)
The Richard Dickerson Irrevocable Trust No.
3, dated July 1, 1991 (9)

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- * Less than one percent.
- (1) In connection with the consummation of our acquisition of the Ecolochem Group the selling stockholders will agree not to transfer, during the six months following the consummation of the acquisition, more than 10% of the shares of our common stock issued to them by us in connection with the acquisition other than transfers to certain related persons. The selling stockholders will also agree to certain restrictions on the sale or other transfer of such shares of our common stock to certain competitors of ours. Notwithstanding the foregoing, we do not know when or in what amounts a selling stockholder may offer shares for sale. The selling stockholders may sell any or all of the shares offered by this prospectus. Because the selling stockholders may offer all or some of the shares pursuant to this offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares, we cannot estimate the number of the shares that will be held by the selling stockholders after completion of the offering. However, for purposes of this table, we have assumed that, after completion of the offering, none of the shares covered by this prospectus will be held by the selling stockholders.
- (2) Pursuant to Rule 416 under the Securities Act of 1933, as amended, this prospectus will also cover an indeterminable number of additional shares of common stock that may be issued to prevent dilution resulting from stock splits, stock dividends or similar transactions affecting the shares to be offered by the selling stockholders.
- (3) Includes _____ shares held by The Lyman B. Dickerson Revocable Trust Dated September 9, 1996 or any Successor Trustee, as amended, of which Lyman B. Dickerson is the sole trustee.
- (4) Includes _____ shares held by The Douglas G. Dickerson Revocable Trust Dated June 22, 1988 or any Successor Trustee, as amended, of which Douglas

- G. Dickerson is the sole trustee.
- (5) Douglas G. Dickerson and Marguerite W. Dickerson, as co-executors, share voting and dispositive power with respect to these shares.
- (6) Douglas G. Dickerson and Marguerite W. Dickerson, as co-trustees, share voting and dispositive power with respect to these shares.
- (7) Lyman B. Dickerson, as trustee and Charles C. Kline, as independent trustee share voting and dispositive power with respect to these shares.
- (8) Douglas G. Dickerson, as trustee and Frederick T. Stant, III, as independent trustee share voting and dispositive power with respect to these shares.
- (9) Douglas G. Dickerson and Marguerite W. Dickerson as co-trustees and Frederick T. Stant, as independent trustee, share voting and dispositive power with respect to these shares.

Each of the selling stockholders is to receive the shares of our common stock held by them in connection with the consummation of our acquisition of Ecolochem, Inc. and its affiliated companies. We intend to appoint Mr. Lyman Dickerson to our Board of Directors simultaneously with the closing of the acquisition. Mr. Lyman Dickerson has substantial direct and indirect interests in the acquisition. All of the selling stockholders may be considered associates of Mr. Lyman Dickerson under the rules of the Securities Exchange Act of 1934, as amended. In addition, upon the closing of the acquisition, we will enter into an employment agreement with Mr. Lyman Dickerson. The terms of this agreement provide that Mr. Lyman Dickerson will be employed as the Vice President of our Water Systems Division (which includes, among other operations, the Ecolochem Group and its respective subsidiaries and our Ultrapure Water and Industrial Water operations). In this position, Mr. Lyman Dickerson will be the senior executive officer for the Division and will be responsible for managing the integration of the Ecolochem Group with our existing operations. The term of this agreement is for two years unless sooner terminated for "cause" (as defined therein) or under certain other circumstances. Under the terms of his employment agreement, Mr. Lyman Dickerson will be entitled to, among other things: an initial base annual salary of \$250,000; participation in our executive bonus program and stock option plans (as determined by our Board of Directors); participation in our benefit plans; and a severance benefit should his employment agreement be terminated by us prior to the expiration of its term for reasons other than "cause".

Each selling stockholder represented to us that he or it acquired the shares of common stock for investment and not with a view to any public distribution thereof in violation of any of the registration requirements of the Securities Act of 1933, as amended. In addition, each selling stockholder has represented that he or it qualifies as an "accredited investor" as such term is defined in Rule 501 of Regulation D under the Securities Act of 1933, as amended. In recognition of the fact that the selling stockholders may desire the ability to sell the shares when they consider it appropriate, in connection with

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the acquisition we agreed to file with the Securities and Exchange Commission a registration statement (of which this prospectus is a part) to permit the resale of the shares from time to time and to use our commercially reasonable efforts to keep the registration statement effective for the period from effectiveness of the registration statement of which this prospectus forms a part until the first date on which (i) the selling stockholders cease to hold in the aggregate a number of shares of common stock equal to the lesser of (a) at least 5% of the number of outstanding shares of our common stock as of the close of business on the day immediately preceding the date upon which we consummate the acquisition of Ecolochem, Inc. and its affiliated companies and (b) at least 5% of the number of outstanding shares of our Common Stock as of the date of measurement;

(ii) following the first anniversary of the date hereof, the number of outstanding shares of our common stock which were first issued to the selling stockholders in connection with the consummation of the acquisition of Ecolochem, Inc. and its affiliated companies (and any securities issued or distributed in respect of such shares by way of conversion, dividend, stock split or other distribution, merger, consolidation, exchange, recapitalization or reclassification) and are still held by the selling stockholders and their permitted assigns equal less than 1% of our then outstanding shares of our common stock, or (iii) no selling stockholder or their permitted assigns are an "affiliate" of ours as such term is defined in Rule 144 of the Securities Act of 1933, as amended and all shares of our common stock first issued to the selling stockholders in connection with the consummation of the acquisition of Ecolochem, Inc. and its affiliated companies (and any securities issued or distributed in respect of such shares by way of conversion, dividend, stock split or other distribution, merger, consolidation, exchange recapitalization or reclassification) may be sold in a single transaction under Rule 144(k) of the Securities Act of 1933, as amended.

Based on representations by the selling stockholders, to the best of our knowledge, none of the selling stockholders had a material relationship with us or any of our affiliates within the three-year period ending on the date of this prospectus.

PLAN OF DISTRIBUTION

The shares of our common stock covered by this prospectus may be offered and sold from time to time by the selling stockholders. The term "selling stockholders" includes pledgees, donees, transferees, designees, or other successors-in-interest selling shares received after the date of this prospectus from a selling stockholder as a gift, pledge, distribution of trust proceeds or other non-sale related transfer provided that any such pledgee, donee, transferee, designee or other successor-in-interest is either (i) another selling stockholder, (ii) the spouse, child, grandchild, aunt, uncle, niece or nephew of any selling stockholder, (iii) an heir, executor, administrator, testamentary trustee, legatee or beneficiary of any selling stockholder or (iv) a trust, the beneficiaries of which, or a corporation or partnership, the stockholders or general and limited partners of which, include only one or more of the persons specified in clauses (i), (ii) and (iii). The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then-current market price or in negotiated transactions. The selling stockholders may sell their shares by one or more of, or a combination of, the following methods:

- o purchases by a broker-dealer as principal and resale by such broker-dealer for it own account pursuant to this prospectus;
- o ordinary brokerage transactions and transactions in which the broker solicits purchasers
- o block trades in which the broker-dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- o in privately negotiated transactions;
- o in options transactions; and
- o through other means.

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In addition, any shares that qualify for sale pursuant to Rule 144 of the Securities Act of 1933, as amended, may be sold under Rule 144 rather than pursuant to this prospectus. No selling stockholder has entered into any agreement with a prospective underwriter and there is no assurance that any such agreement will be entered into.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution. In connection with distributions of the shares or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of the common stock in the course of hedging the positions they assume with selling stockholders. The selling stockholders may also sell the common stock short and redeliver the shares to close out such short positions. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). The selling stockholders may also pledge shares to a broker-dealer or other financial institution, and, upon a default, such broker-dealer or other financial institution, may effect sales of the pledged shares pursuant to this prospectus (as supplemented or amended to reflect such transaction).

In effecting sales, broker-dealers or agents engaged by the selling stockholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling stockholders in amounts to be negotiated immediately prior to the sale.

In offering the shares covered by this prospectus, the selling stockholders and any broker-dealers who execute sales for the selling stockholders may be deemed to be "underwriters" within the meaning of the Securities Act of 1933, as amended, in connection with such sales. Any profits realized by the selling stockholders and compensation of any broker-dealer may be deemed to be underwriting discounts and commissions.

In order to comply with the securities laws of certain jurisdictions, the shares offered by this prospectus may need to be offered or sold in such jurisdictions only through registered or licensed brokers or dealers.

Under applicable rules and regulations under the Securities Exchange Act of 1934, any person engaged in a distribution of the shares of common stock covered by this prospectus may be limited in their ability to engage in market activities with respect to such shares. The selling stockholders, for example, will be subject to applicable provisions of the Securities Exchange Act of 1934 and the rules and regulations under it, including, without limitation Regulation M, which provisions may restrict certain activities of the selling stockholders and limit the timing of purchases and sales of any shares of common stock by the selling stockholders. Furthermore, under Regulation M, persons engaged in a distribution of securities are prohibited from simultaneously engaging in market making and certain other activities with respect to such securities for a specified period of time prior to the commencement of such distributions, subject to specified exceptions or exemptions. The foregoing may affect the marketability of the shares offered by this prospectus.

We have agreed to pay the fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, New York Stock Exchange listing

fees, and fees and expenses of our counsel, one counsel to the selling stockholders and our accountants. The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by the selling stockholders in disposing of the shares. We will not receive any of the proceeds from the sale of our common stock by the selling stockholders.

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We have agreed to indemnify the selling stockholders against certain liabilities, including certain liabilities under the Securities Act of 1933, as amended.

We have agreed to use our commercially reasonable efforts to keep the registration statement effective for the period from effectiveness of the registration statement of which this prospectus forms a part until the first date on which (i) the selling stockholders cease to hold in the aggregate a number of shares of common stock equal to the lesser of (a) at least 5% of the number of outstanding shares of our common stock as of the close of business on the day immediately preceding the date upon which we consummate the acquisition of Ecolochem, Inc. and its affiliated companies and (b) at least 5% of the number of outstanding shares of our common stock at the date of measurement; (ii) following the first anniversary of the date hereof, the number of outstanding shares of our common stock which were first issued to the selling stockholders in connection with the consummation of the acquisition of Ecolochem, Inc. and its affiliated companies (and any securities issued or distributed in respect of such shares by way of conversion, dividend, stock split or other distribution, merger, consolidation, exchange, recapitalization or reclassification) and are still held by the selling stockholders and their permitted assigns equal less than 1% of our then outstanding shares of our common stock, or (iii) no selling stockholder or their permitted assigns is an "affiliate" of ours as such term is defined in Rule 144 of the Securities Act of 1933, as amended, and all shares of our common stock first issued to the selling stockholders in connection with the consummation of the acquisition of Ecolochem, Inc. and its affiliated companies (and any securities issued or distributed in respect of such shares by way of conversion, dividend, stock split or other distribution, merger, consolidation, exchange recapitalization or reclassification) may be sold in a single transaction under Rule 144(k) of the Securities Act of 1933, as amended. We may suspend the selling stockholders' rights to resell shares under this prospectus under certain limited circumstances.

Equiserve Trust Company, N.A., 150 Royall Street, Canton, MA 02021, is the transfer agent for the shares of our common stock.

LEGAL MATTERS

The validity of the shares of our common stock offered hereby will be passed upon for us by Stephen Korn, Vice President and General Counsel of Ionics. Mr. Korn beneficially owns 128,816 shares of our common stock, which number includes 126,000 shares subject to options, as to which Mr. Korn has the right to acquire beneficial ownership, and 1,593 shares (as of January 14, 2004) in our Section 401(k) Plan for the account of Mr. Korn.

EXPERTS

The consolidated financial statements as of December 31, 2002 and 2001 and for each of the three years in the period ended December 31, 2002 incorporated in this Prospectus by reference to Ionics, Incorporated's Current Report on Form 8-K dated December 24, 2003, have been so incorporated in reliance on the reports of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

The combined financial statements of the Ecolochem Group incorporated in this prospectus by reference to our Proxy Statement dated January 9, 2004, have been so incorporated in reliance upon the report of KPMG LLP, independent accountants given on the authority of said firm as experts in auditing and accounting.

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WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any document we file with the Securities and Exchange Commission at the Securities and Exchange Commission's public reference room at 450 Fifth Street, N.W., Washington, D.C. 20549. You should call the Securities and Exchange Commission at 1-800-SEC-0330 for further information on operation of the public reference room. Our Securities and Exchange Commission filings are also available to the public from the Securities and Exchange Commission's Internet site at http://www.sec.gov and from our Internet site at http://www.ionics.com. In addition, these materials may be read at the offices of the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission. The registration statement contains more information than this prospectus regarding us and our common stock, including certain exhibits and schedules. You can obtain a copy of the registration statement from the Securities and Exchange Commission at the address listed above or from the Securities and Exchange Commission's Internet site.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The Securities and Exchange Commission allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. We incorporate by reference the following documents:

- (a) Our Annual Report on Form 10-K for the fiscal year ended December 31, 2002, as amended by Form 10-K/A filed with the SEC on April 1, 2003, Form 11-K filed with the SEC on June 26, 2003 and Form 10-K/A filed with the SEC on October 2, 2003;
- (b) Our Proxy Statement filed with the SEC on January 9, 2004 pursuant to the Securities Exchange Act of 1934, as amended, which contains the audited combined financial statements for the Ecolochem Group as of September 30, 2003 and 2002, and for each of the years in the three-year period ended September 30, 2003 and the unaudited pro forma combined condensed balance sheet as of September 30, 2003 and the unaudited pro forma combined condensed statements of operations for the nine months ended September 30, 2003 and the fiscal year ended December 31, 2002, and the additional proxy solicitation materials filed with the SEC on January 15, 2004 pursuant to the Securities Exchange Act of 1934, as amended;
- (c) Our Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2003 (as amended by Form 10-Q/A filed with the SEC on October 2, 2003), June 30, 2003 and September 30, 2003;
- (d) Our Current Reports on Form 8-K filed on May 6, 2003, August 1, 2003, October 7, 2003, November 4, 2003, November 19, 2003, November 26, 2003 and

December 24, 2003 (which contains our audited financial statements as of December 31, 2002 and 2001 and for each of the years in the three-year period ended December 31, 2002); and

(e) The section entitled "Description of Registrant's Securities to be Registered" contained in our Registration Statement on Form 8-A, filed with the SEC on September 27, 1990 pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended.

All documents we file with the Securities and Exchange Commission under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, subsequent to the date of this prospectus and prior to the earlier of the sale of all the shares of common stock covered by this prospectus and the termination of the offering of the shares of common stock covered by this

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prospectus shall be deemed incorporated by reference into this prospectus and to be a part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purpose of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus (including any exhibits to such documents that are specifically incorporated by reference in that information, but excluding other exhibits to such documents) but not delivered with this prospectus. You may request a copy of these documents at no cost, by writing or telephoning Stephen Korn, Clerk, Ionics, Incorporated, 65 Grove Street, Watertown, MA 02472-2882, telephone (617) 673-4450.

This prospectus is part of a registration statement we filed with the Securities and Exchange Commission. You should rely only on the information incorporated by reference, provided in this prospectus, or any supplement that we have referred you to. We have authorized no one to provide you with different information. You should not assume that the information in this prospectus or any supplement is accurate as of any date other than the date on the front of those documents. However, you should realize that the affairs of Ionics may have changed since the date of this prospectus. This prospectus will not reflect such changes. You should not consider this prospectus to be an offer or solicitation relating to the securities in any jurisdiction in which such an offer or solicitation relating to the securities is not authorized. Furthermore, you should not consider this prospectus to be an offer or solicitation relating to the securities if the person making the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation.

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth an estimate (other than with respect to the Securities and Exchange Commission registration fee) of the expenses expected to be incurred in connection with the issuance and distribution of the securities being registered, all of which will be borne by Ionics, Incorporated (except any underwriting discounts and commissions incurred by the selling stockholders in disposing the shares):

Registration Fee Securities and Exchange Commission\$	11,953.62
Accounting Fees and Expenses\$	5,000.00
Legal Fees and Expenses\$	20,000.00
Miscellaneous\$	5,000.00
TOTAL\$	41,953.62
===	

Item 15. Indemnification of Directors and Officers.

Ionics is permitted by the Massachusetts Business Corporation Law and required by its By-laws to indemnify any director or officer or former director or officer against all expenses and liabilities reasonably incurred by him or her in connection with any legal action in which such person is involved by reason of his position with Ionics unless he or she shall have been finally adjudicated in any action, suit or proceeding not to have acted in good faith in the reasonable belief that his action was in the best interests of Ionics. Such indemnification shall include payment by Ionics of expenses incurred in defending a civil or criminal action or proceeding in advance of the final disposition of such action or defending a civil or criminal action or proceeding, upon Ionics' receipt of the undertaking of the person indemnified to repay such payment if such person shall be adjudicated not entitled to such indemnification.

Directors and officers of Ionics are also insured up to an aggregate of \$15,000,000 under a Directors' and Officers' Liability and Company Reimbursement Policy, and up to an additional \$5,000,000 under a Directors' and Officers' Liability Policy.

The Restated Articles of Organization of Ionics includes a provision limiting the personal liability of directors of Ionics to its stockholders for monetary damages for breaches of their fiduciary duty to the extent permitted by the Massachusetts Business Corporation Law...

Item 16. Exhibits.

The following exhibits, required by Item 601 of Regulation S-K, are filed as a part of this Registration Statement. Exhibit numbers, where applicable, in the left column correspond to those of Item 601 of Regulation S-K.

Exhibit No.	Item and Reference
2.1	Purchase Agreement dated as of November 18, 2003 between the individuals and entities listed on Exhibit A thereto and Ionics Incorporated (filed as Exhibit 2.1 to the Current Report on Form 8-K of Ionics dated November 26, 2003 and incorporated herein by reference).

4.1	Form of Stockholders Agreement among Ionics, Incorporated and the Individuals and Entities listed on Exhibit A thereto (filed as Annex B to the Proxy Statement on Schedule 14A of Ionics filed on January 9, 2004 and incorporated herein by reference).
4.2	Renewed Rights Agreement, dated as of August 19, 1997 between Registrant and BankBoston N.A. as Rights Agent (filed as Exhibit 1 to the Current Report on Form 8-K of Ionics dated August 27, 1997 and incorporated herein by reference).
4.3	Amendment No. 1 dated as of November 17, 2003, to the Renewed Rights Agreement dated August 19, 1997 between Ionics, Incorporated and EquiServe Trust Company as Rights Agent (and successor in interest to BankBoston N.A.) (filed as Exhibit 4.1 to the Current Report on Form 8-K of Ionics dated November 26, 2003 and incorporated herein by reference).
4.4	Form of Common Stock Certificate (filed as Exhibit 4.2 to Annual Report on Form 10-K of Ionics for year ended December 31, 1997 and incorporated herein by reference).
5	Opinion of Stephen Korn, Esquire (filed herewith).
23.1	Consent of PricewaterhouseCoopers LLP (filed herewith).
23.2 23.3	Consent of KPMG LLP (filed herewith) Consent of Stephen Korn, Esquire (included in Exhibit 5).
24	Power of Attorney (included on signature pages).

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represents a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high and of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (1)(i) and 1(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended, that are incorporated by reference in the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, as amended, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, as amended, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934, as amended) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers and controlling persons of the registrant pursuant to provisions described in Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933, as amended, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933, as amended, and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and have duly caused this registration statement to be signed on its behalf by the undersigned, thereunto

duly authorized in the City of Watertown, Commonwealth of Massachusetts on January 19, 2004.

Ionics, Incorporated

By:/s/ Douglas R. Brown

Douglas R. Brown President and Chief Executive Officer

Power of Attorney

Each person whose signature appears below on this registration statement hereby constitutes and appoints Douglas R. Brown and Stephen Korn and each of them, with full power to act without the other, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities (until revoked in writing) to sign any and all amendments (including post-effective amendments and amendments thereto) to this registration statement of Ionics, Incorporated, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary fully to all intents and purposes as he or she might or could do in person thereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Name Capacity

/s/ Douglas R. Brown	President and Chief Executive Officer
Douglas R. Brown	(principal executive officer) and Director
/s/ Daniel M. Kuzmak	Vice President, Finance and Chief Financial
Daniel M. Kuzmak	Officer (principal financial officer)
/s/ Anthony Di Paola	Vice President and Corporate Controller
Anthony Di Paola	(principal accounting officer)

/s/ Stephen L. Brown	Director
Stephen L. Brown	-
/s/ Arthur L. Goldstein	Chairman of the Board and Director
Arthur L. Goldstein	-
	Director
Kathleen F. Feldstein	-
/s/ William K. Reilly	Director
William K. Reilly	-
/s/ John J. Shields	Director
John J. Shields	-
/s/ Daniel I. C. Wang	Director
Daniel I. C. Wang	-
/s/ Mark S. Wrighton	Director
Mark S. Wrighton	-
/s/ Allen S. Wyett	Director
Allen S. Wyett	-

INDEX TO EXHIBITS

Exhibit No.	Item and Reference
2.1	Purchase Agreement dated as of November 18, 2003 between the individuals and entities listed on Exhibit A thereto and Ionics Incorporated (filed as Exhibit 2.1 to the Current Report on Form 8-K of Ionics dated November 26, 2003 and incorporated herein by reference).
4.1	Form of Stockholders Agreement among Ionics, Incorporated and the Individuals and Entities listed on Exhibit A thereto (filed as Annex B to the Proxy Statement on Schedule 14A of Ionics filed on January 9, 2004 and incorporated herein by reference).
4.2	Renewed Rights Agreement, dated as of August 19, 1997 between Registrant and BankBoston N.A. as Rights Agent (filed as Exhibit 1 to the Current Report on Form 8-K of Ionics dated August 27, 1997 and incorporated herein by reference).
4.3	Amendment No. 1 dated as of November 17, 2003, to the Renewed Rights Agreement dated August 19, 1997 between

Ionics, Incorporated and EquiServe Trust Company as Rights Agent (and successor in interest to BankBoston N.A.) (filed as Exhibit 4.1 to the Current Report on Form 8-K of Ionics dated November 26, 2003 and incorporated herein by reference). Form of Common Stock Certificate (filed as Exhibit 4.2 to Annual Report on Form 10-K of Ionics for year ended December 31, 1997 and incorporated herein by reference). Opinion of Stephen Korn, Esquire (filed herewith). Consent of PricewaterhouseCoopers LLP (filed herewith).

23.2 Consent of KPMG LLP (filed herewith) 23.3

Consent of Stephen Korn, Esquire (included in

Exhibit 5).

24 Power of Attorney (included on signature pages).

EXHIBIT 5

January 19, 2004

Ionics, Incorporated 65 Grove Street Watertown, Massachusetts 02472-2882

S-3 Registration Statement

Ladies and Gentlemen:

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23.1

As General Counsel to Ionics, Incorporated, a Massachusetts corporation (the "Company"), I have represented the Company in connection with the preparation and filing of the Company's Form S-3 Registration Statement (the "Registration Statement"), covering the sale to the public of up to 4,905,660 shares of the Company's common stock (the "Common Stock"), \$1.00 par value per share (the "Shares"), which may be sold by certain selling stockholders of the Company as set forth in the Registration Statement.

I have reviewed the corporate proceedings taken by the Board of Directors of the Company with respect to the authorization and issuance of the Shares. I have also examined and relied upon originals or copies, certified or otherwise authenticated to my satisfaction, of all corporate records, documents, agreements or other instruments of the Company and have made all investigations of law and have discussed with the Company's officers all questions of fact that I have deemed necessary or appropriate.

Based upon and subject to the foregoing, I am of the opinion that the Shares, when issued to the selling stockholders as described in the Registration Statement, will be legally issued, fully paid and non-assessable.

I hereby consent to the filing of this opinion as Exhibit 5 to the Registration Statement and to the reference to my name in the prospectus contained in the Registration Statement under the caption "Legal Matters."

Very truly yours,

/s/ Stephen Korn
-----Stephen Korn
General Counsel

Exhibit 23.1

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of Ionics, Incorporated of our report dated March 26, 2003, except for Note 6 and the second paragraph of Note 1, as to which the date is December 23, 2003, relating to the financial statements of Ionics, Incorporated, which appears in the Current Report on Form 8-K dated December 24, 2003. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

Exhibit 23.2

CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the use of our report dated November 3, 2003 relating to the combined financial statements of The Ecolochem Group, which report is incorporated herein by reference, and to the reference to our firm under the heading "experts" in the registration statement.

/s/ KPMG LLP ------KPMG LLP Norfolk, Virginia January 16, 2004

125 High Street Boston, Massachusetts 02110-2704

Office (617) 248-7000

Fax (617) 248-7100

January 20, 2004

VIA EDGAR

Securities and Exchange Commission Division of Corporate Finance 450 Fifth Street, N.W. Judiciary Plaza Washington, D.C. 20549 Attn: Filing Desk

Re: Ionics, Incorporated - Registration Statement on Form S-3

Ladies and Gentlemen:

On behalf of Ionics, Incorporated (the "Company"), transmitted herewith for filing with the Securities and Exchange Commission (the "Commission") pursuant to Regulation S-T is one (1) conformed copy of a Registration Statement on Form S-3 (the "Registration Statement"), with exhibits, relating to the offering by certain stockholders of the Company of an aggregate of 4,905,660 shares of common stock, par value \$1.00 per share, of the Company.

A filing fee of \$11,953.62 has been paid prior to the Company's filing of the Registration Statement by wire transfer to the Commission's account at Mellon Bank.

Pursuant to Rule 461 under the Securities Act of 1933 (the "Act"), the Company may make a request for acceleration of the effective date of the above referenced Registration Statement orally. As required by Rule 461, the Company has authorized us to represent on their behalf that they are aware of their obligations under the Act.

If you should have any questions, or require any additional information, please contact me at (617) 248-7292, Edwin C. Pease of this office at (617) 248-7080 or Stephen Korn, the Company's Vice President and General Counsel, at (617) 926-2500.

Sincerely,

/s/ Mark H. Burnett

Mark H. Burnett

Enclosure