

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3609194

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| LIGNOL INNOVATIONS LTD. | 01/30/2015 |
| RECEIVING PARTY DATA | |
| Name: | FIBRIA INNOVATIONS INC. |
| Street Address: | 1200 WATERFRONT CENTRE |
| Internal Address: | 200 BURRARD STREET |
| City: | VANCOUVER, BRITISH COLUMBIA |
| State/Country: | CANADA |
| Postal Code: | V7XIT2 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Patent Number: | 8431635 |
| CORRESPONDENCE DATA | |
| Fax Number: | (650)838-4350 |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> | |
| Phone: | 650-838-4300 |
| Email: | kfarrell@perkinscoie.com |
| Correspondent Name: | PERKINS COIE LLP |
| Address Line 1: | P.O. BOX 1208 |
| Address Line 4: | SEATTLE, WASHINGTON 98111-1208 |
| ATTORNEY DOCKET NUMBER: | 117341-8104.US00 |
| NAME OF SUBMITTER: | VIOLA T. KUNG |
| SIGNATURE: | /VIOLA T. KUNG/ |
| DATE SIGNED: | 11/10/2015 |
| Total Attachments: 7 | |
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PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT (the "Assignment") is made effective as of January 30, 2015 (the "Effective Date"), by and between **The Bowra Group Inc.** ("Assignor"), in its capacity as court-appointed receiver over the assets, undertakings and properties of Lignol Innovations Ltd. ("**Lignol**"), including the proceeds thereof, and not in its personal capacity, and **Fibria Innovations Inc.** ("Assignee"), a company incorporated under the laws of the Province of British Columbia and having its registered office at 1200 Waterfront Centre, 200 Burrard Street, Vancouver, British Columbia, V7X 1T2. Assignor and Assignee are sometimes referred to herein individually as a "Party" and collectively as the "Parties". Capitalized terms used but not defined herein shall have the meaning ascribed to such terms in the Purchase Agreement (as defined herein).

RECITALS:

WHEREAS, Lignol is the owner of the patents and patent applications identified on **Schedule "A"** hereto (collectively, the "Assigned Patents"); and

WHEREAS, pursuant to the Purchase and Sale Agreement dated as of January 14, 2015 (the "Purchase Agreement") between Assignor and Assignee and the Approval and Vesting Order granted by the Supreme Court of British Columbia on January 16, 2015, Assignor is assigning to the Assignee all of Lignol's right, title and interest in, to and under the Assigned Patents;

NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged and in consideration of the mutual agreements, provisions and covenants contained in this Assignment, the Parties, intending to be legally bound, hereby agree as follows:

1. **Conveyance.** Effective as of the Effective Date, Assignor hereby sells, assigns, transfers, and conveys to Assignee its entire right, title and interest in, to and under the Assigned Patents and any goodwill symbolized thereby, both in Canada and in all foreign countries, including:
 - 1.1 all continuations, continuations-in-part, divisions, renewals, extensions and reissues of any of the Patents;
 - 1.2 all letters patent which may be granted with respect to patent applications that form part of the Patents;
 - 1.3 the right to claim all benefits and priority rights with respect to the Patents under any applicable convention; and
 - 1.4 the right to sue for all past and future infringements of, and to collect all past and future damages and royalties accruing from, any of the Patents.
2. **Issuance and Recordation.** Assignor hereby authorizes and requests the patent office, and any corresponding official of any country whose duty it is to register patents and applications, of any country in which the Assigned Patents are filed, to register any and



all Assigned Patents in the name of Assignee, its successors and assigns, in accordance with the terms of this Assignment. Assignor hereby requests the patent office, and the corresponding officials or agencies in any other applicable jurisdiction, to record Assignee as the assignee and owner of the Assigned Patents. Assignee shall have the right to record this Assignment with all applicable government authorities and registrars so as to perfect its ownership of the Assigned Patents.

3. **No Modification.** Nothing contained in this Assignment is intended to or shall be deemed to modify, alter, amend or otherwise change any of the rights or obligations of Assignee or Assignor under the Purchase Agreement or any other agreement entered into by the Parties. Without limiting the foregoing, in the event and to the extent that there is a conflict between the provisions of this Assignment and the provisions of the Purchase Agreement, the provisions of the Purchase Agreement shall control.
4. **Successors and Assigns.** This Assignment shall be binding upon and enure to the benefit of the Parties and their respective successors and assigns.
5. **Counterparts.** This Assignment may be executed in one or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same agreement and shall become effective when one or more counterparts have been signed by each of the Parties and delivered to the other Party, it being understood that both Parties need not sign the same counterpart.
6. **Interpretation.** The Article and Section headings contained in this Assignment are solely for the purpose of reference, are not part of the agreement of the Parties and shall not in any way affect the meaning or interpretation of this Assignment.
7. **Further Assurances.** Assignor and Assignee hereby covenant and agree, without the necessity of any further consideration, to execute, acknowledge, and deliver any and all such other documents and take any such other action as may be reasonably necessary or appropriate to implement this Assignment and carry out the intent and purposes of this Assignment.
8. **Governing Law.** This Assignment shall be governed by and construed and interpreted in accordance with the laws of the Province of British Columbia, Canada, and the federal laws of Canada applicable therein.

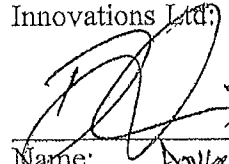
[Signature page follows]



IN WITNESS WHEREOF, Assignor and Assignee have caused this Assignment to be executed by their duly authorized representatives as of the Effective Date.

ASSIGNOR:

The Bowra Group Inc., in its capacity as court-appointed receiver over the assets, undertakings and properties of Lignol Innovations Ltd:



Name: David UTIVERS
Title: SENIOR VP

ASSIGNEE:

Fibria Innovations Inc., by its authorized signatory:

Name: _____
Title: _____

IN WITNESS WHEREOF, Assignor and Assignee have caused this Assignment to be executed by their duly authorized representatives as of the Effective Date.

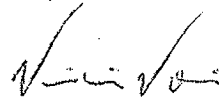
ASSIGNOR:

The Bowra Group Inc., in its capacity as court-appointed receiver over the assets, undertakings and properties of Lignol Innovations Ltd:

Name: _____
Title: _____

ASSIGNEE:

Fibria Innovations Inc., by its authorized signatory:



Name: VINICIUS NONATO
Title: DIRECTOR



A-1

**SCHEDULE "A"
ASSIGNED PATENTS**

Assigned Patents

[Insert Schedule "B" from Purchase and Sale Agreement]

Signature page to Patent Assignment



**PATENT
REEL: 037001 FRAME: 0209**

Lignol Innovations Ltd. Intellectual Property Portfolio Summary

Lignol has created a robust portfolio of Intellectual Property. This portfolio can be divided into 3 broad segments:

1. A series of process and system patents based on Lignol's biorefinery technology. These have evolved over time, as improvements and innovations were found to the original "Alcell"¹ organosolv pre-treatment process. These patents are further supported by technical know-how, experience and expertise developed through years of applied research and operation of various processes at bench, pilot and pre-commercial scale. These patents are summarized in Appendix 1.
2. A series of lignin composition of matter and other patents which claim a wide range of lignin derivatives based on their chemical and functional characteristics, such as aliphatic hydroxyl content, normalized radical scavenging index (nRSI), molecular weight, etc. Lignol views these patents as most valuable as the claims capture lignins produced by a number common manufacturing methods, including Kraft and other pulping processes. In addition, these patents cover most of the lignocellulosic feedstocks, including hardwoods, softwoods and annual fibres. Six of these patents have already been granted or allowed in the US, with others pending in CA, EP, BR, CN, etc. These patents are summarized in Appendix 2.

Any manufacturer wishing to make, use or sell lignin products within the patented countries will have to ensure their products, or intermediate products, do not fall within the claim scope of these patents. This could at a minimum involve costly and time consuming analytical testing of their lignin products for multiple properties to ensure non-infringement. Furthermore, any change in process conditions, environmental conditions, or feedstock composition will necessitate additional testing and/or actions to avoid infringement.

3. A number of lignin application patents which target specific end-use. These patents are summarized in Appendix 3.

¹ The Alcell process was developed by Repap in the mid 1980's through to late 1990's as an alternative sulphur-free pulping process to produce high quality pulp and high value-added coproducts, mainly lignin and furfural. Lignol acquired all rights to the Alcell process, along with technical design and operation data in early 2000's.



