



Micromem Technologies Inc.
Consolidated Financial Statements
For the years ended October 31, 2021, 2020 and 2019
(Expressed in United States Dollars)

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Micromem Technologies Inc.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of Micromem Technologies Inc. (the Company) as of October 31, 2021 and 2020, and the related consolidated statements of operations and comprehensive loss, changes in equity, and cash flows for each of the years in the three-year period ended October 31, 2021, and the related notes and schedules (collectively referred to as the consolidated financial statements).

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of October 31, 2021 and 2020, and the results of its consolidated operations and its consolidated cash flows for each of the years in the three-year period ended October 31, 2021, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

Material Uncertainty Related to Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has suffered recurring losses from operations and has a net capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. This matter is also described in the "Critical Audit Matters" section of our report.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Going Concern

Critical Audit Matter Description

As described in Note 2, the Company's operations are mainly funded with debt financing, which is dependent upon many external factors and maybe difficult to raise when required. The Company may not have sufficient cash to fund its operations, and therefore, will require additional funding, which if not raised, may result in the delay, postponement or curtailment of some or all its activities. Management has prepared future cash flow forecasts, which involves judgement and estimation of key variables, such as planned capital expenditures, revenue, production volumes and market conditions. Future economic conditions, including the impact of the global COVID-19 pandemic and effects of key events subsequent to the year end, such as debt financing, also impacted management's judgements and estimates. We identified the Company's ability to continue as a going concern as a critical audit matter because auditing the Company's going concern assessment is complex and involves a high degree of auditor judgment to assess the reasonableness of the cash flow forecasts, planned refinancing actions and other assumptions used in the Company's going concern analysis. The Company's ability to execute the planned refinancing actions are especially judgmental given that the global financial markets and economic conditions have been, and continue to be, volatile as a result of the COVID-19 pandemic. This matter is also described in the "Material Uncertainty Related to Going Concern" section of our report.

Audit Response

We responded to this matter by performing procedures over management's assessment of the Company's ability to continue as a going concern. Our audit work in relation to this included, but was not restricted to, the following:

- We evaluated the cash flow forecasts prepared by management and evaluated the integrity and arithmetical accuracy of the model.
- We evaluated the key assumptions used in the model to estimate future cash flows for a reasonable period of time, not exceeding 12 months from the date of the Statements of Financial Position, by comparing assumptions used by management against historical performance, budgets, economic and industry indicators and publicly available information.
- We evaluated the key assumptions pertaining to estimated cash flows from operating activities and expected cash flows from financing activities, comparing these to available market data, underlying agreements, private placement raises and subsequent events thereafter.
- We assessed the adequacy of the going concern and COVID-19 disclosures included in Note 2 of the consolidated financial statements and consider these to appropriately reflect the assessments that management has performed.

Valuation of Financial Instruments

Critical Audit Matter Description

As described in Note 11 to the consolidated financial statements, for the year ended October 31, 2021, the Company has various convertible debentures some of which result in the recognition of derivative liabilities. Management measured the fair value of the embedded derivative liability using the valuation techniques that require management to make several assumptions related to the inputs into those models. Auditing management's valuations of the derivative liability was challenging due to the complexity of accounting for the instruments, the related valuation models and the inputs into those models, which are highly sensitive to changes, such as volatility, risk free rates, conversion price and discount rate.

Audit Response

We responded to this matter by performing procedures over valuation of debt instruments. Our audit work in relation to this included, but was not restricted to:

- Obtaining and reviewing management's analysis of the financial instruments including the assessment of the accounting for the financial instruments and the valuation methodology
- Obtained signed copies of all agreements, including renewals, conversions and any new issuances and confirmed the balances and terms for a sample of the financial instruments

- Obtained support for cash receipts related to a sample of newly issued financial instruments and cash disbursements related to a sample of repayments, and, for a sample of conversions, obtained support such as conversion notices and share issuances as confirmed with the transfer agent.
- We involved professionals with specialized skill and knowledge to assist in developing an independent implied interest rate range for a similar liability without a convertible feature and assessment of the prepayment option embedded in the loans.
- We tested the mathematical accuracy of the valuation model and agreed certain inputs including volatility, risk free rates, conversion rates and discount rate to underlying source information.

MNP LLP

Chartered Professional Accountants
Licensed Public Accountants

Toronto, Canada
February 14, 2022

We have served as the Company's auditor since 2017

Micromem Technologies Inc.
Consolidated Statements of Financial Position
As at October 31, 2021 and 2020
(Expressed in United States dollars)

	<u>Notes</u>	<u>2021</u>	<u>2020</u>
Assets			
Current			
Cash	20	\$ 171,397	\$ 191,479
Prepaid expenses and other receivables		24,007	25,421
Total current assets		195,404	216,900
Property and equipment	7	26,012	49,249
Patents	8	3,877	11,877
Total assets		\$ 225,293	\$ 278,026
Liabilities			
Current			
Trade payables and other liabilities	20(c)	\$ 384,057	\$ 767,949
Current lease liability	9	24,788	36,442
Convertible debentures	11,20	2,452,402	3,081,518
Derivative liabilities	11,20	787,081	533,562
Total current liabilities		3,648,328	4,419,471
Long-term lease liability	9	-	15,628
Long-term loan	10	48,243	30,269
Total liabilities		3,696,571	4,465,368
Shareholders' Deficiency			
Share capital	12	86,815,836	85,463,642
Contributed surplus		28,197,382	27,810,586
Equity component of convertible debentures	11	14,004	23,952
Accumulated deficit		(118,498,500)	(117,485,522)
Total shareholders' deficiency		(3,471,278)	(4,187,342)
Total liabilities and shareholders' deficiency		\$ 225,293	\$ 278,026
Going concern	2		
Contingencies	19		
Subsequent events	23		

The accompanying notes are an integral part of these consolidated financial statements.

Approved on behalf of the Board of Directors:

"Joseph Fuda"

Director

"Alex Dey"

Director

Micromem Technologies Inc.
Consolidated Statements of Operations and Comprehensive Loss
For the years ended October 31, 2021, 2020 and 2019
(Expressed in United States dollars)

	<u>Notes</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>
Operating expenses				
General and administrative	16(a)	\$ 155,504	\$ 154,007	\$ 197,208
Professional, other fees and salaries	16(b)	424,485	462,124	441,981
Recovery of reserve for litigation costs	18(b)	-	(205,788)	-
Statute barred payables	18(b)	(422,982)	-	-
Stock-based compensation	13	360,044	-	-
Development costs (recovery)		-	-	(41,546)
Travel and entertainment		24,903	23,903	52,568
Amortization of property and equipment	7	28,033	27,735	3,175
Amortization of patents	8	8,000	8,123	152,962
Impairment of patents	8	-	-	223,143
Foreign exchange loss (gain)	20(a)	222,553	1,447	(40,548)
Total operating expenses		<u>800,540</u>	<u>471,551</u>	<u>988,943</u>
Other expenses				
Accretion expense	11	1,169,921	1,099,818	1,517,436
Convertible debt interest expense	11	495,809	441,369	496,172
Financing costs	11	84,478	35,500	72,476
Gain on revaluation of derivative liabilities	11	(2,547,192)	(771,920)	(343,436)
(Gain) loss on conversion of convertible debentures	11	(9,506)	96,484	101,919
Loss (gain) on extinguishment of convertible debentures	11	1,018,928	(127,409)	(646)
Total other expenses		<u>212,438</u>	<u>773,842</u>	<u>1,843,921</u>
Net loss before income tax provision		(1,012,978)	(1,245,393)	(2,832,864)
Income tax provision	15	-	-	-
Total comprehensive loss		<u>\$ (1,012,978)</u>	<u>\$ (1,245,393)</u>	<u>\$ (2,832,864)</u>
Weighted average number of outstanding shares,				
basic and diluted	14	422,613,046	377,380,476	288,398,051
Basic and diluted loss per share	14	\$ -	\$ -	\$ (0.01)

The accompanying notes are an integral part of these consolidated financial statements.

Micromem Technologies Inc.
Consolidated Statements of Changes in Equity
For the years ended October 31, 2021, 2020 and 2019
(Expressed in United States dollars)

	Notes	Number of shares	Share capital	Contributed surplus	Equity component of convertible debentures	Accumulated deficit	Total
Balance at November 1, 2018		259,602,699	\$ 82,282,903	\$ 27,630,909	\$ 70,283	\$(113,407,265)	\$ (3,423,170)
Private placements of shares for cash	12	4,961,059	212,968	-	-	-	212,968
Financing costs converted into common shares	11(b)	350,000	21,000	-	-	-	21,000
Convertible debentures converted into common shares	11	82,038,963	1,636,825	-	-	-	1,636,825
Expiry of convertible debenture conversion option	11	-	-	126,730	(126,730)	-	-
Renewal of convertible debentures	11	-	-	-	106,594	-	106,594
Net loss		-	-	-	-	(2,832,864)	(2,832,864)
Balance at October 31, 2019		346,952,721	\$ 84,153,696	\$ 27,757,639	\$ 50,147	\$(116,240,129)	\$ (4,278,647)
Private placements of shares for cash	12	10,996,994	425,789	-	-	-	425,789
Convertible debentures converted into common shares	11	44,237,644	859,331	-	-	-	859,331
Expiry of convertible debenture conversion option	11	-	-	52,947	(52,947)	-	-
Renewal of convertible debentures	11	-	-	-	26,752	-	26,752
Shares issued on settlement of accounts payable		365,094	24,826	-	-	-	24,826
Net loss		-	-	-	-	(1,245,393)	(1,245,393)
Balance at October 31, 2020		402,552,453	\$ 85,463,642	\$ 27,810,586	\$ 23,952	\$(117,485,522)	\$ (4,187,342)
Private placements of shares for cash	12	17,573,429	840,564	-	-	-	840,564
Stock-based compensation	13	-	-	360,044	-	-	360,044
Convertible debentures converted into common shares	11	15,611,852	511,630	-	-	-	511,630
Expiry of convertible debenture conversion option	11	-	-	26,752	(26,752)	-	-
Renewal of convertible debentures	11	-	-	-	16,804	-	16,804
Net loss		-	-	-	-	(1,012,978)	(1,012,978)
Balance at October 31, 2021		435,737,734	\$ 86,815,836	\$ 28,197,382	\$ 14,004	\$(118,498,500)	\$ (3,471,278)

The accompanying notes are an integral part of these consolidated financial statements.

Micromem Technologies Inc.
Consolidated Statements of Cash Flows
For the years ended October 31, 2021, 2020 and 2019
(Expressed in United States dollars)

	Notes	2021	2020	2019
Operating activities				
Net loss		\$ (1,012,978)	\$ (1,245,393)	\$ (2,832,864)
Items not affecting cash:				
Amortization of property and equipment	7	28,033	27,735	3,175
Amortization of patents	8	8,000	8,123	152,962
Impairment of patents	8	-	-	223,143
Accretion expense	11,17	1,169,921	1,099,818	1,517,436
Accrued interest on convertible debentures	11,17	408,543	285,679	164,243
Convertible debenture interest converted	11,17	196,964	21,160	63,409
Loss on conversion of convertible debentures	11	(9,506)	96,484	101,919
Gain on revaluation of derivative liabilities	11,17	(2,547,192)	(771,920)	(343,436)
Loss (gain) on extinguishment of convertible debentures	11,17	1,018,928	(127,409)	(646)
Shares issued for financing costs	11,17	-	7,500	21,000
Stock-based compensation	13	360,044	-	-
Statute barred payables	18(b)	(422,982)	-	-
Loss on disposal of property and equipment	7	475	-	5,000
Foreign exchange (gain) loss	20	421,462	78,004	(136,606)
		<u>(380,288)</u>	<u>(520,219)</u>	<u>(1,061,265)</u>
Net changes in non-cash working capital:				
Decrease in development costs receivable		-	-	81,841
Decrease (increase) in prepaid expenses and other receivables		1,414	(10,670)	1,980
Decrease in trade payables and other liabilities		<u>(383,892)</u>	<u>(229,683)</u>	<u>(4,993)</u>
Cash flows used in operating activities		<u>(762,766)</u>	<u>(760,572)</u>	<u>(982,437)</u>
Investing activity				
Purchase of property and equipment	7	(5,271)	-	-
Cash flows used in investing activity		<u>(5,271)</u>	<u>-</u>	<u>-</u>
Financing activities				
Repayment of lease liability	9	(27,282)	(11,423)	-
Proceeds from long-term debt	10	17,974	30,269	-
Private placements of shares for cash	12	840,564	425,789	212,968
Proceeds from issuance of convertible debentures	11, 17	510,000	612,279	780,891
Repayments of convertible debentures	11, 17	(593,301)	(150,920)	(172,198)
Cash flows provided by financing activities		<u>747,955</u>	<u>905,995</u>	<u>821,661</u>
Net change in cash		<u>(20,082)</u>	<u>145,423</u>	<u>(160,776)</u>
Cash - beginning of year		<u>191,479</u>	<u>46,056</u>	<u>206,832</u>
Cash - end of year		<u>\$ 171,397</u>	<u>\$ 191,479</u>	<u>\$ 46,056</u>
Supplemental cash flow information				
Interest paid (classified in operating activities)	9,11	\$ 87,266	\$ 155,690	\$ 353,214
Interest paid on non-convertible debt		\$ 11,785	\$ 8,081	\$ -
Interest paid on lease liability	9	\$ 9,160	\$ 14,081	\$ -
Carrying amount of convertible debentures converted into common shares	11, 17	\$ 521,136	\$ 762,847	\$ 1,636,825
Shares issued on settlement of accounts payable		\$ -	\$ 24,826	\$ -

The accompanying notes are an integral part of these consolidated financial statements.

Micromem Technologies Inc.
Notes to Consolidated Financial Statements
For the years ended October 31, 2021, 2020 and 2019
(Expressed in United States dollars, unless otherwise noted)

1. Reporting entity and nature of business

Micromem Technologies Inc. ("Micromem" or the "Company") is incorporated under the laws of the Province of Ontario, Canada. Micromem is a publicly traded company with its head office located at 121 Richmond Street West, Suite 304, Toronto, Ontario, Canada. The Company's common shares are currently listed on the Canadian Securities Exchange under the trading symbol "MRM" and on the Over the Counter Venture Market under the trading symbol "MMTIF".

The Company develops, based upon proprietary technology, customized sensor applications for companies (referred to as "development partners") operating internationally in various industry segments. The Company has not generated commercial revenues through October 31, 2021 and is devoting substantially all its efforts to securing commercial revenue opportunities.

2. Going concern

These consolidated financial statements have been prepared with the assumption that the Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future.

There are material uncertainties related to conditions and events that cast significant doubt about the Company's ability to continue as a going concern and ultimately on the appropriateness of the use of the accounting principles applicable to a going concern. During the year ended October 31, 2021, the Company reported a net loss and comprehensive loss of \$1,012,978 (2020 - \$1,245,393, 2019 - \$2,832,864) and negative cash flow from operations of \$762,766 (2020 - \$760,572, 2019 - \$982,437). The Company's working capital deficiency as at October 31, 2021 was \$3,452,924 (2020 - \$4,202,571).

The Company's success depends on the profitable commercialization of its proprietary sensor technology. There is no assurance that the Company will be successful in the profitable commercialization of its technology. Based upon its current operating and financial plans, management of the Company believes that it will have sufficient access to financial resources to fund the Company's planned operations through fiscal 2022; however, the ability of the Company to continue as a going concern is dependent upon its ability to secure additional financing and/or profitably commercialize its technology. These consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classifications of liabilities that may result from the possible inability of the Company to continue as a going concern.

The COVID-19 pandemic creates additional risk for the Company if there is a prolonged industry slowdown in those sectors where the Company currently operates including the oil and gas sectors in particular. To date, the impact of the pandemic has resulted in the layoff of Company staff as of March 27, 2020. The Company has encountered significant delays in the commercial plans for its technology with its primary target customers. As of October 31, 2021, the Company has secured a government backed loan of \$60,000 CDN (\$48,243 USD) (2020 - \$40,000 CDN, \$30,269 USD) which matures in December 2025 (Note 10) and received government wage subsidies of \$167,388 CDN (\$133,699 USD) (2020 - \$nil) (Note 16(b)(i)). The Company has also received rent subsidies of \$38,440 CDN (\$30,613 USD) (2020 - \$nil) (Note 16(a)(i)).

If the going concern assumption were not appropriate for these consolidated financial statements then adjustments would be necessary to the carrying value of assets and liabilities, and the reported expenses and the statement of financial position classifications used; in such cases, these adjustments would be material.

Micromem Technologies Inc.
Notes to Consolidated Financial Statements
For the years ended October 31, 2021, 2020 and 2019
(Expressed in United States dollars, unless otherwise noted)

3. Basis of presentation

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") and interpretations issued by the IFRS Interpretations Committee ("IFRIC"). The Company has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

These consolidated financial statements were authorized for issuance and release by the Company's Board of Directors on February 14, 2022.

(a) Basis of consolidation

These consolidated financial statements include the accounts of Micromem Technologies Inc. and its subsidiaries. All intercompany transactions and balances have been eliminated upon consolidation. The Company applies the acquisition method to account for business combinations. Acquisition-related costs are expensed as incurred.

The Company's wholly-owned subsidiaries include:

- (i) Micromem Applied Sensors Technology Inc. ("MAST") which was incorporated in November 2007 and is domiciled in Delaware, United States. MAST has previously had the primary responsibility for the exploitation of the Company's technologies in conjunction with various strategic partners and customers.
- (ii) 7070179 Canada Inc. which was incorporated in October 2008 under the Canada Business Corporations Act in Ontario, Canada. The Company has assigned to this entity its rights, title and interests in certain patents, which it previously held, directly, in exchange for common shares of this entity.

(iii)	<u>Inactive subsidiaries</u>	<u>Domiciled in</u>
	Memtech International Inc.	Bahamas
	Memtech International (USA) Inc., Pageant Technologies (USA) Inc.	United States
	Pageant Technologies Inc., Micromem Holdings (Barbados) Inc.	Barbados

(b) Basis of measurement

These consolidated financial statements have been prepared on the historical cost basis, except for financial instruments designated at fair value through profit and loss which are measured at their fair value.

(c) Functional and presentation currency

These consolidated financial statements are presented in United States dollars ("USD"), which is the functional currency of the Company and all of its subsidiaries.

(d) Use of estimates and judgments

The preparation of these consolidated financial statements in conformity with IFRSs requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. These estimates are reviewed periodically and adjustments are made as appropriate in the reporting period they become known. Items for which actual results may differ materially from these estimates are described in the following section.

3. Basis of presentation (continued)

(d) Use of estimates and judgments (continued)

(i) Fair value of options and conversion features

The Company makes estimates and utilizes assumptions in determining the fair value for stock options and derivative liabilities based on the application of the Black-Scholes option pricing model or the binomial option pricing model, depending on the circumstances. These pricing models require management to make various assumptions and estimates that are susceptible to uncertainty, including the volatility of the share price, expected dividend yield, expected term, expected risk-free interest rate, and exercise price in the binomial option pricing model.

(ii) Useful lives and recoverability of long-lived assets

Long-lived assets consist of property and equipment and patents. Amortization is dependent upon estimates of useful lives and impairment is dependent upon estimates of recoverable amounts. These are determined through the exercise of judgment and are dependent upon estimates that take into account factors such as economic and market conditions, frequency of use, anticipated changes in laws, and technological improvements.

(iii) Income taxes

Income taxes and tax exposures recognized in the consolidated financial statements reflect management's best estimate of the outcome based on facts known at the reporting date. When the Company anticipates a future income tax payment based on its estimates, it recognizes a liability. The difference between the expected amount and the final tax outcome has an impact on current and deferred taxes when the Company becomes aware of this difference.

When the Company incurs losses for income tax purposes, it assesses the probability of taxable income being available in the future, based on budgeted forecasts. These forecasts are adjusted for certain non-taxable income and expenses and specific rules on the use of unused credits and tax losses. When the forecasts indicate that sufficient future taxable income will be available to deduct the temporary differences, a deferred tax asset is recognized for all deductible temporary differences.

(iv) Going concern assumption

The Company applies judgment in assessing whether material uncertainties exist that would cause doubt as to the whether the Company could continue as a going concern.

4. Summary of significant accounting policies

The principal accounting policies applied to the preparation of these consolidated financial statements are set out below:

(a) Foreign currency translation

These consolidated financial statements are presented in USD, which is the functional currency of the Company and all of its subsidiaries. At each reporting date, foreign currency denominated monetary assets and liabilities are translated at year-end exchange rates. Nonmonetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Income and expenses, and cash flows of foreign operations, are translated into USD using annual average exchange rates. Exchange differences arising from operating transactions are recorded in operating profit or loss for the period; exchange differences related to financing transactions are recognized in finance income or directly in equity.

4. Summary of significant accounting policies (continued)

(b) Financial instruments

The Company aggregates similar financial instruments into classes based on their nature and characteristics. All financial assets except those classified as fair value through profit or loss are reviewed at each reporting date to determine whether there is any indication of impairment. Financial assets are considered to be impaired when there is objective evidence that the estimated future cash flows of the investment have been affected as a result of one or more events that occurred after the initial recognition.

The Company's accounting policy for each class of financial instruments is as follows:

(i) Fair value through profit or loss

Financial instruments classified as fair value through profit or loss are reported at fair value at each reporting date, and any change in fair value is recognized in net income in the period during which the change occurs. In these consolidated financial statements, cash and derivative liabilities have been classified as fair value through profit or loss.

(ii) Loans and receivables and other financial liabilities

Financial instruments classified as loans and receivables and other financial liabilities are carried at amortized cost using the effective interest method. Transaction costs are included in the amount initially recognized. In these consolidated financial statements, trade payables and other liabilities and convertible debentures have been classified as other financial liabilities.

(c) Convertible debentures and derivative liabilities

The Company issues convertible debentures used as bridge loans, which can be converted into common shares at the option of the holder, into a fixed number of shares for a fixed amount of consideration, or into a fixed number of shares for a variable amount of consideration, or into a variable number of shares.

(i) Initial recognition

Upon initial recognition, the Company determines whether the convertible debentures consist of liability and equity components, or if both components represent liabilities.

For convertible debentures which provide conversion into a fixed number of shares, the liability component is recognized initially at the fair value of a similar, non-convertible liability. The equity component is recognized as the difference between the fair value of the instrument as a whole and the fair value of the liability component. Any directly attributable transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts.

For convertible debentures which provide conversion into a variable number of shares or into a fixed number of shares for a variable amount of consideration, the conversion option is accounted for as an embedded derivative, which is separated from the host contract. Upon initial recognition, the derivative liability is valued at fair value using a Black Scholes or a binomial pricing model. The carrying amount of the convertible debenture is recognized as the difference between the fair value of the instrument as a whole and the fair value of the derivative liability. Any directly attributable transaction costs allocated to the derivative liability are expensed in the period.

Micromem Technologies Inc.
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For the years ended October 31, 2021, 2020 and 2019
(Expressed in United States dollars, unless otherwise noted)

4. Summary of significant accounting policies (continued)

(c) Convertible debentures and derivative liabilities (continued)

(ii) Modifications and extinguishments

To the extent there are changes to the terms of outstanding convertible debentures, these changes may be recorded as a modification or an extinguishment. A substantial change in the terms of an existing financial liability is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. The terms are substantially different if the discounted present value of the cash flows under the new terms is at least 10% different from the discounted present value of the remaining cash flows of the original financial liability. For a modification that does not result in derecognition, a gain or loss will be recognised in profit or loss for the difference between the original contractual cash flows and the modified cash flows discounted at the original effective interest rate.

(d) Property and equipment

Property and equipment are recorded at cost and are amortized over their estimated useful lives at the following annual rates and methods:

	Method	Rate
Computers	Declining balance	30%
Furniture and equipment	Declining balance	30%
Right-of-use asset	Straight-line	over remaining 8 month lease term

(e) Impairment of long-lived assets

The Company follows the guidelines prescribed in IAS 36 with respect to the measurement for impairment of assets. The carrying amounts of property and equipment and patents are reviewed for impairment when events or changes in circumstances indicate that the carrying amounts may not be recoverable. When the carrying amount exceeds the estimated recoverable amount, the assets are written down to their recoverable amount.

The recoverable amount of long-lived assets is the greater of fair value less costs to sell and value in use. Impairment losses are recognized in the consolidated statements of loss and comprehensive loss.

(f) Development costs

Research costs are expensed in the period incurred. Development costs are expensed as incurred unless they meet the criteria for capitalization. Expenditures during the development phase are capitalized if the Company can demonstrate each of the following criteria: (i) the technical feasibility of completing the asset so that it will be available for use or sale, (ii) its intention to complete the asset and use or sell it, (iii) its ability to use or sell the asset, (iv) how the asset will generate probable future economic benefits, (v) the availability of adequate technical, financial and other resources to complete the development and to use or sell the asset, and (vi) its ability to measure reliably the expenditure attributable to the asset during its development; otherwise, these costs are expensed as incurred. Costs to be recovered from development partners are recorded to development costs receivable. Payments received from development partners on projects are recorded to income as a recovery of costs incurred and reduce the outstanding receivable. There were no development costs incurred or recovery of such costs in 2021 or in 2020. Recovery of historic development costs in 2019 amounted to \$41,546.

4. Summary of significant accounting policies (continued)

(g) Patents

Patents are recorded at cost and are amortized on a straight line basis over their estimated useful lives of 5 years.

(h) Leases

At the inception of a contract, the Company assesses whether a contract is, or contains a lease. A contract is, or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company recognizes a right-of-use asset and a lease liability at the commencement date of the lease. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset, less any lease incentives received. The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. In addition, the right-of-use assets are adjusted for impairment losses, if any. The estimated useful lives and recoverable amounts of right-of-use assets are determined on the same basis as those of property and equipment. The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate currently set at 24%. The lease liability is subsequently measured at amortized cost using the effective interest method. The Company has elected not to recognize right-of-use assets and lease liabilities for short-term leases (lease term of 12 months or less) and leases for which the underlying asset is of low value as there are none. The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

(i) Stock-based compensation and other stock-based payments

Where equity instruments are granted to employees, they are recorded at the fair value of the equity instrument granted at the grant date. The grant date fair value is recognized in net income over the vesting period. Where equity instruments are granted to non-employees, they are recorded at the fair value of the goods or services received. When the value of goods or services received in exchange for the stock-based payment cannot be reliably estimated, the fair value is measured by use of a valuation model. The cost recognized for all equity-settled stock-based payments are reflected in contributed surplus, until the instruments are exercised. Upon exercise, shares are issued from treasury and the amount previously reflected in contributed surplus along with any proceeds paid upon exercise, are credited to share capital.

(j) Government grants

The Company recognises government grants when there is reasonable assurance of compliance with grant conditions and that the grants will be received. Government grants are recognised in profit or loss on a systematic basis over the periods when the related expenses are incurred and are presented in the consolidated financial statements as a reduction of these expenses. A government grant that becomes receivable as compensation for expenses already incurred is recognised in profit or loss of the period in which it becomes receivable.

4. Summary of significant accounting policies (continued)

(k) Income taxes

The Company accounts for its income taxes using the deferred tax assets and liabilities method. Deferred income tax assets and liabilities are determined based on the difference between the carrying amount and the tax basis of the assets and liabilities. Any change in the net amount of deferred income tax assets and liabilities is included in profit or loss or equity. Deferred income tax assets and liabilities are determined based on enacted or substantively enacted tax rates and laws which are expected to apply to taxable profit for the years in which the assets and liabilities will be recovered or settled. Deferred income tax assets are recognized when it is probable they will be realized. Deferred tax assets and liabilities are not discounted.

(l) Provisions

Provision for risks and expenses are recognized for probable outflows of resources that can be estimated and that result from present obligations resulting from past events. In the case where a potential obligation resulting from past events exists, but where occurrence of the outflow of resources is not probable or the estimate is not reliable, these contingencies are disclosed. Provisions, if any, are measured based on management's best estimates of outcomes on the basis of facts known at the reporting date.

(m) Share capital

Share capital is presented at the fair value of the shares issued. Costs related to the issuance of shares are reported in equity, net of tax, as a deduction from the issuance proceeds.

(n) Earnings or loss per share

The Company presents basic and diluted earnings per share data for its common shares. Basic earnings per share is calculated by dividing the profit or loss attributable to common shareholders of the Company by the weighted average number of common shares outstanding during the period. Diluted earnings per share is determined by adjusting the profit or loss attributable to common shareholders and the weighted average number of common shares outstanding, for the effects of all potentially dilutive common shares, which comprise stock options and convertible debentures.

5. Adoption of new accounting pronouncements

(a) IAS 1 Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors

IAS 1 and IAS 8 were amended in October 2018 to refine the definition of materiality and clarify its characteristics. The revised definition focuses on the idea that information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. The amendments are effective for annual reporting periods beginning on or after January 1, 2020, with earlier adoption permitted. The Company has adopted this interpretation as of its effective date and assessed no significant impact as a result of the adoption of these amendments.

6. New and revised standards and interpretations issued but not yet effective

Certain pronouncements were issued by the IASB or the IFRIC that are mandatory for accounting periods commencing on or after January 1, 2021. These pronouncements are not applicable or do not have a significant impact to the Company and have been excluded.

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7. Property and equipment

	November 1, 2019	Additions / Disposals	October 31, 2020	Additions / Disposals	Writeoffs	October 31, 2021
Cost						
Computers	\$ 32,040	\$ -	\$ 32,040	\$ 5,271	\$ (18,741)	\$ 18,570
Right-of-use assets	74,307	-	74,307	-	-	74,307
	<u>\$ 106,347</u>	<u>\$ -</u>	<u>\$ 106,347</u>	<u>\$ 5,271</u>	<u>\$ (18,741)</u>	<u>\$ 92,877</u>
Accumulated amortization						
Computers	\$ 29,363	\$ 714	\$ 30,077	\$ 1,013	\$ (18,266)	\$ 12,824
Right-of-use assets	-	27,021	27,021	27,020	-	54,041
	<u>\$ 29,363</u>	<u>\$ 27,735</u>	<u>\$ 57,098</u>	<u>\$ 28,033</u>	<u>\$ (18,266)</u>	<u>\$ 66,865</u>
Net book value	<u>\$ 76,984</u>		<u>\$ 49,249</u>			<u>\$ 26,012</u>

8. Patents

	November 1, 2019	Additions	October 31, 2020	Additions	Writeoffs	October 31, 2021
Cost	\$ 681,288	\$ -	\$ 681,288	\$ -	\$ -	\$ 681,288
Accumulated amortization	661,288	8,123	669,411	8,000	-	677,411
Net book value	<u>\$ 20,000</u>		<u>\$ 11,877</u>			<u>\$ 3,877</u>

The Company holds several patents in the United States for its Multimodal Fluid Condition Sensor Platform. In prior years, the Company had negotiated with a major automotive company and a Tier 1 manufacturer for the development and commercial exploitation of this patented technology. In 2019, the Company discontinued provisional patent applications in international jurisdictions and determined that the patents were impaired as its carrying amount was higher than its recoverable amount. The value in use, measured as the present value of the future cash flows expected to be derived from this asset class, had been estimated at a minimum of \$20,000 at October 31, 2019. Accordingly, the Company recorded an impairment reserve of \$223,143 in fiscal year 2019. The Company maintains that there remains significant potential value in its existing patents in terms of potential licensing agreements and royalty fees once it begins to exploit this asset class in the future.

9. Leases

(a) Maturity analysis of lease obligations

The following represents a maturity analysis of the Company's undiscounted contractual lease obligations as at October 31, 2021.

	<u>CDN</u>
Less than one year	\$ 32,040

(b) Supplemental disclosure

For the year ended October 31, 2021, the Company recognized \$9,160 of interest expense on lease obligations in the consolidated statements of operations and comprehensive loss. The Company further recognized total cash outflow of \$36,442 relating to leases.

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10. Long-term loan

As at October 31, 2021, the Company has obtained a \$60,000 CDN (\$48,243 USD) (2020 - \$40,000 CDN (\$30,269 USD)) interest-free loan from the Government of Canada under the Canada Emergency Business Account ("CEBA") program to cover its operating costs. The term loan matures on December 31, 2025. Repaying the balance of the loan on or before December 31, 2022 will result in a loan forgiveness of \$20,000 CDN (\$15,963 USD). Effective January 1, 2023, any outstanding balance on the term loan shall bear interest at a rate of 5% per annum. As the Company does not yet know whether they will be able to meet the terms of forgiveness, no amount has been recognized to income.

11. Convertible debentures

The Company issues three types of convertible debentures: USD denominated convertible debentures with an equity component, Canadian dollar ("CDN") denominated convertible debentures with an embedded derivative due to variable consideration payable upon conversion caused by foreign exchange, and USD denominated convertible debentures with an embedded derivative caused by variable conversion prices.

	Convertible debentures		Derivative liabilities		Equity component of convertible debentures	
	2021	2020	2021	2020	2021	2020
(a)	\$ 2,248,108	\$ 2,881,719	\$ 557,322	\$ 197,270	\$ 14,004	\$ 23,952
(b)	204,294	199,799	229,759	336,292	-	-
	<u>\$2,452,402</u>	<u>\$ 3,081,518</u>	<u>\$ 787,081</u>	<u>\$ 533,562</u>	<u>\$ 14,004</u>	<u>\$ 23,952</u>

(a) USD denominated debentures with equity components and CDN denominated debentures with embedded derivatives

(b) USD denominated debentures with embedded derivatives

All loan principal amounts are expressed in original currency and all remaining dollar amounts expressed in USD. Convertible debentures outstanding as at October 31:

	USD (equity component)		CDN (embedded derivative)	
	2021	2020	2021	2020
Loan principal				
Opening balance	\$ 1,096,200	\$ 931,000	\$ 2,129,705	\$ 2,271,017
Issuance during the year	146,682	185,200	-	17,052
Repayment or conversion	(205,100)	(20,000)	(140,518)	(158,364)
Outstanding at year-end	<u>\$ 1,037,782</u>	<u>\$ 1,096,200</u>	<u>\$ 1,989,187</u>	<u>\$ 2,129,705</u>
Terms of loan				
Annual interest rate	12% - 24%	12% - 24%	12% - 24%	12% - 24%
Effective annual interest rate	24%	24%	13% - 28735624%	12% - 1270%
Conversion price to common shares	\$0.03 - \$0.07	\$0.03 - \$0.07	\$0.05 - \$0.08	\$0.05 - \$0.14
Remaining life (in months)	0 - 6	1 - 9	0 - 6	0 - 6
Consolidated Statement of Financial Position				
Carrying value of loan principal	\$ 1,036,124	\$ 1,083,375	\$ 609,924	\$ 1,403,787
Interest payable	332,605	151,387	269,455	243,170
Convertible debentures	<u>\$ 1,368,729</u>	<u>\$ 1,234,762</u>	<u>\$ 879,379</u>	<u>\$ 1,646,957</u>
Derivative liabilities	\$ -	\$ -	\$ 557,323	\$ 197,270
Equity component of convertible debentures	\$ 14,004	\$ 23,952	\$ -	\$ -

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11. Convertible debentures (continued)

(a) USD denominated debentures with equity components and CDN denominated debentures with embedded derivatives

Consolidated Statement of Operations and Comprehensive Loss

	USD (equity component)		CDN	
	2021	2020	CDN (embedded derivative) 2021	2020
Accretion expense	\$ 28,001	\$ 37,934	\$ 1,003,613	\$ 723,641
Interest expense	\$ 236,519	\$ 194,091	\$ 226,520	\$ 215,923
Gain on revaluation of derivative liabilities	\$ -	\$ -	\$ (2,718,409)	\$ (590,625)
Gain on conversion of convertible debentures	\$ -	\$ -	\$ (47,356)	\$ -
Loss (gain) on extinguishment of convertible debentures	\$ -	\$ -	\$ 1,360,536	\$ (10,919)

Consolidated Statement of Changes in Equity

Amount of principal converted to common shares	\$ -	\$ 20,000	\$ 100,000	\$ 35,000
Amount of interest converted to common shares	\$ 30,200	\$ 447	\$ 160,064	\$ 1,168
Number of common shares issued on conversion of convertible debentures	1,118,519	511,175	7,744,774	731,440

Consolidated Statement of Cash Flows

Amount of principal repaid in cash	\$ 205,100	\$ -	\$ 31,492	\$ 93,721
Amount of interest repaid in cash	\$ 25,101	\$ 60,918	\$ 36,052	\$ 93,005

(b) USD denominated debentures with embedded derivatives

During the year ended October 31, 2021, the Company has incurred \$84,478 (2020 - \$35,500; 2019 - \$72,476) in financing costs which primarily consist of early repayment premiums and administrative fees relating to the convertible debentures, of which \$nil (2020 - \$7,500; 2019 - \$21,000) was converted into common shares.

Convertible debentures outstanding as at October 31, 2021:

	(i)		(ii)	
	USD (embedded derivative) 2021	2020	USD (embedded derivative) 2021	2020
Loan principal				
Opening balance	\$ 226,000	\$ 304,000	\$ 288,770	\$ 121,000
Issuance (settlement) during the year	617,200	449,000	(15,000)	273,770
Conversion	(284,000)	(447,000)	-	(106,000)
Repayment	(261,600)	(80,000)	(102,770)	-
Outstanding at year-end	<u>\$ 297,600</u>	<u>\$ 226,000</u>	<u>\$ 171,000</u>	<u>\$ 288,770</u>
Terms of loan				
Annual interest rate	4%	4%	2% - 10%	2% - 10%
Effective annual interest rate	5255% - 5525%	4070% - 5278%	0% - 24%	2573% - 20559%
Conversion price to common shares	(i)	(i)	(ii)	(ii)
Remaining life (in months)	5 - 10	9 - 12	0	0 - 5
Consolidated Statement of Financial Position				
Carrying value of loan principal	\$ 1,166	\$ 56	\$ 171,000	\$ 165,564
Interest payable	15,445	14,515	16,683	19,664
Convertible debentures	<u>\$ 16,611</u>	<u>\$ 14,571</u>	<u>\$ 187,683</u>	<u>\$ 185,228</u>
Derivative liabilities	\$ 170,456	\$ 153,804	\$ 59,303	\$ 182,489

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11. Convertible debentures (continued)

(b) USD denominated debentures with embedded derivatives (continued)

Consolidated Statement of Operations and Comprehensive Loss

	(i)		(ii)	
	USD (embedded derivative) 2021	USD (embedded derivative) 2020	USD (embedded derivative) 2021	USD (embedded derivative) 2020
Accretion expense	\$ 15,102	\$ 136,533	\$ 123,206	\$ 201,711
Interest expense	\$ 21,659	\$ 11,390	\$ 11,110	\$ 19,965
Loss (gain) on revaluation of derivative liabilities	\$ 25,821	\$ (73,082)	\$ 145,396	\$ (106,213)
Loss on conversion of convertible debentures	\$ 37,851	\$ 54,436	\$ -	\$ 42,048
Gain on extinguishment of convertible debentures	\$ (73,026)	\$ (116,490)	\$ (268,582)	\$ -

Consolidated Statement of Changes in Equity

Amount of principal converted to common shares	\$ 284,000	\$ 447,000	\$ -	\$ 106,000
Amount of interest converted to common shares	\$ 6,700	\$ 6,060	\$ -	\$ 20,986
Number of common shares issued on conversion of convertible debentures	6,748,559	29,409,479	-	13,585,550

Consolidated Statement of Cash Flows

Amount of principal repaid in cash	\$ 261,600	\$ 80,000	\$ 102,770	\$ -
Amount of interest repaid in cash	\$ 14,030	\$ 1,767	\$ 12,083	\$ -

- (i) Conversion price defined as 75% multiplied by the average of the lowest 3 closing stock prices for the 10 trading days prior to conversion date.
- (ii) Conversion price defined as 75% multiplied by the lowest stock price for the 20 trading days prior to conversion date.

(c) Fair value of derivative liabilities outstanding

The fair value of the derivative liabilities is determined in accordance with the Black-Scholes or binomial option-pricing models, depending on the circumstances. The underlying assumptions are as follows:

	2021	2020
Share price	\$0.05	\$0.02
Exercise price	\$0.03 - \$0.07	\$0.01 - \$0.11
Volatility factor (based on historical volatility)	32% - 133%	100% - 187%
Risk free interest rate	0.17% - 0.55%	0.10% - 0.19%
Expected life of conversion features (in months)	0 - 10	0 - 12
Expected dividend yield	0%	0%
CDN to USD exchange rate (as applicable)	0.8041	0.7567
Call value	\$0.01 - \$0.04	\$0.00 - \$0.02

Volatility was estimated using the historical volatility of the Company's stock prices for common shares.

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12. Share capital

(a) Authorized and outstanding shares

The Company has two classes of shares as follows:

- (i) Special redeemable voting preference shares - 2,000,000 authorized, nil issued and outstanding.
- (ii) Common shares without par value – an unlimited number authorized. The holders of the common shares are entitled to receive dividends which may be declared from time to time, and are entitled to one vote per share at shareholder meetings of the Company. All common shares are ranked equally with regards to the Company's residual assets.

(b) Private placements

- (i) In 2021, the Company completed 37 private placements with investors consisting of common shares with no warrants, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$840,564 and issued a total of 17,573,429 common shares.
- (ii) In 2020, the Company completed three private placements with investors consisting of common shares with no warrants, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$425,789 and issued a total of 10,996,994 common shares.
- (iii) In 2019, the Company completed four private placements with investors consisting of common shares with no warrants, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$212,968 and issued a total of 4,961,059 common shares.

13. Stock options

(a) Stock option plan

Until September 8, 2020, under the Company's fixed stock option plan (the "Plan"), the Company could grant up to 18,840,000 shares of common stock to directors, officers, employees or consultants of the Company and its subsidiaries. The exercise price of each option is equal to or greater than the market price of the Company's shares on the date of grant unless otherwise permitted by applicable securities regulations. An option's maximum term under the Plan is 10 years. Stock options are fully vested upon issuance by the Company unless the Board of Directors stipulates otherwise by Directors' resolution.

The Company held its Annual General Meeting of Shareholders on September 8, 2020. The authorized limit for stock options in the Company's plan was increased from 18.84 million options to 27.5 million options at the meeting.

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13. Stock options (continued)

(b) Summary of changes

	Number of options	Weighted average exercise price
Outstanding at November 1, 2019	5,730,000	\$ 0.25
Cancelled	(2,040,000)	0.25
Expired	(1,490,000)	0.46
Outstanding at October 31, 2020	2,200,000	\$ 0.10
Granted	9,500,000	0.06
Outstanding at October 31, 2021	11,700,000	\$ 0.06

There were 5,000,000 options issued to directors and officers during the year ended October 31, 2021 (2020 - nil; 2019 - nil) and 4,500,000 options issued to employees (2020 - nil; 2019 - nil). These options vested upon issuance.

(c) Stock options outstanding at October 31, 2021

Date of issue	Expiry date	Number of options	Weighted average	
			Exercise price	Remaining contractual life (years)
June 29, 2018	June 29, 2023	2,200,000	\$ 0.10	1.7
November 13, 2020	November 13, 2025	6,500,000	0.05	4.0
October 8, 2021	October 8, 2026	1,000,000	0.07	4.9
October 8, 2021	October 8, 2022	1,000,000	0.07	0.9
October 8, 2021	April 8, 2022	1,000,000	0.07	0.4
Outstanding and exercisable at October 31, 2021		11,700,000	\$ 0.06	3.1

(d) Fair value of options issued during the period

The fair value of the stock options is determined in accordance with the Black-Scholes option-pricing model. The underlying assumptions are as follows:

	2021
Share price at grant date (per share)	\$0.05
Exercise price	\$0.05 - \$0.07
Volatility factor (based on historical volatility)	148% - 180%
Risk free interest rate	0.75%
Expected life of options (in years)	5
Expected dividend yield	0%
Forfeiture rate	0%
Weighted average Black-Scholes value at grant date	\$0.05 - \$0.06

Volatility was estimated using the historical volatility of the Company's stock prices for common shares.

The weighted average exercise price on the dates of issuance was \$0.05 (2020 - \$nil; 2019 - \$nil).

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14. Loss per share

Basic and diluted loss per share are calculated using the following numerators and denominators:

Numerator	2021	2020	2019
Loss attributable to common shareholders	\$ (1,012,978)	\$ (1,245,393)	\$ (2,832,864)
Loss used in computation of basic and diluted loss per share	\$ (1,012,978)	\$ (1,245,393)	\$ (2,832,864)
Denominator			
Weighted average number of common shares for computation of basic and diluted loss per share	422,613,046	377,380,476	288,398,051

For the years ended October 31, 2021, 2020, and 2019, all stock options and conversion features were anti-dilutive and, therefore, are excluded from the calculation of diluted loss per share.

15. Income taxes

- (a) The Company has non-capital losses of approximately \$33.6 million available to reduce future taxable income, the benefit of which has not been recognized in these consolidated financial statements. At October 31, 2021, the tax losses expire as follows:

	Canada	Other foreign	Total
2026	\$ 1,939,567	\$ -	\$ 1,939,567
2027	1,631,024	-	1,631,024
2028	-	-	-
2029	1,671,583	143,221	1,814,804
2030	2,255,401	1,880,897	4,136,298
2031	1,358,809	18,526	1,377,335
2032	1,505,914	325,793	1,831,707
2033	1,825,316	157,463	1,982,779
2034	2,640,613	679,089	3,319,702
2035	2,984,122	570,901	3,555,023
2036	3,502,035	441,019	3,943,054
2037	2,803,481	232,719	3,036,200
2038	1,895,257	317	1,895,574
2039	1,695,389	-	1,695,389
2040	531,199	-	531,199
2041	989,523	-	989,523
	<u>\$ 29,229,232</u>	<u>\$ 4,449,945</u>	<u>\$ 33,679,177</u>

- (b) In addition, the Company has available capital loss carry forwards of approximately \$1.3 million to reduce future taxable capital gains, the benefit of which has not been recognized in these consolidated financial statements. Capital losses carry forward indefinitely.

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15. Income taxes (continued)

- (c) Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities are as follows:

	<u>2021</u>	<u>2020</u>	<u>2019</u>
Non-capital losses and other	\$ 8,924,982	\$ 8,232,346	\$ 8,073,286
Capital losses	178,808	166,316	175,090
Property, equipment, patents and deferred costs	1,794,285	1,666,788	1,668,632
	<u>\$ 10,898,075</u>	<u>\$ 10,065,450</u>	<u>\$ 9,917,008</u>
Deferred tax asset not recognized	<u>(10,898,075)</u>	<u>(10,065,450)</u>	<u>(9,917,008)</u>
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

As at October 31, 2021 and 2020, the Company assessed that it is not probable that sufficient taxable profit will be available to use deferred income tax assets based on operating losses in prior years; therefore, there are no balances carried in the consolidated statements of financial position for such assets.

- (d) The reconciliation of income tax attributed to continuing operations computed at the statutory tax rates to income tax expense is as follows:

	<u>2021</u>	<u>2020</u>	<u>2019</u>
Loss before income taxes	\$ (1,012,978)	\$ (1,245,393)	\$ (2,832,864)
Statutory tax rate	26.50%	26.50%	26.50%
Expected income tax recovery	\$ (268,439)	\$ (330,029)	\$ (750,709)
Non-deductible expenses and other items	80,462	143,550	270,610
Effect of exchange rate on deferred tax assets carried forward and other	(644,649)	38,037	4,269
Change in deferred tax assets not recognized	832,626	148,442	475,830
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

16. Operating expenses

- (a) General and administrative

The components of general and administrative expenses are as follows:

	<u>2021</u>	<u>2020</u>	<u>2019</u>
General and administrative	\$ 86,186	\$ 49,702	\$ 56,720
Rent and occupancy	15,536	37,153	64,647
Office insurance	753	2,024	26,812
Investor relations, listing and filing fees	53,029	49,537	49,029
Loss on settlement of accounts payable	-	15,591	-
	<u>\$ 155,504</u>	<u>\$ 154,007</u>	<u>\$ 197,208</u>

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16. Operating expenses (continued)

(a) General and administrative (continued)

(i) Rent subsidy

The Government of Canada announced the Canada Emergency Rent Subsidy (CERS) to support eligible businesses by covering part of their commercial rent or property expenses. For the year ended October 31, 2021, the Company recognized \$38,440 CDN (\$30,613 USD) of rent subsidy under this program, which has been recorded as a reduction of rent and occupancy expenses in the consolidated statements of operations and comprehensive loss. This program ran from September 27, 2020 to October 23, 2021.

(b) Professional, other fees and salaries

The components of professional, other fees and salaries expenses are as follows:

	<u>2021</u>	<u>2020</u>	<u>2019</u>
Professional fees	\$ 107,554	\$ 148,926	\$ 157,354
Consulting fees	132,793	138,123	53,845
Salaries and benefits	184,138	175,075	230,782
	<u>\$ 424,485</u>	<u>\$ 462,124</u>	<u>\$ 441,981</u>

(i) Wage subsidy

The Canada Emergency Wage Subsidy (CEWS) was announced by the Government of Canada on March 27, 2020 to enable companies negatively impacted by COVID-19 to re-hire workers. Under this program, qualifying businesses can receive a subsidy for a portion of their employees' wages.

For the year ended October 31, 2021, the Company recognized \$167,388 CDN (\$133,699 USD) (2020 - \$85,455 CDN (\$63,792 USD)) of wage subsidy under this program, which has been recorded as a reduction of salaries expenses in the consolidated statements of operations and comprehensive loss. This program concluded on October 23, 2021.

17. Supplemental cash flow information

The following provides a reconciliation of the cash flows from convertible debentures and derivative liabilities :

	<u>2021</u>	<u>2020</u>
Balance - beginning of period	\$ 3,615,080	\$ 3,364,499
Cash flows from financing activities:		
Proceeds from issuance of convertible debentures ⁽ⁱ⁾	510,000	612,279
Repayments of convertible debentures	(593,301)	(150,920)
Non-cash changes:		
Accretion expense	1,169,921	1,099,818
Accrued interest on convertible debentures	408,543	285,679
Gain on revaluation of derivative liabilities	(2,547,192)	(771,920)
Gain on extinguishment of debt	1,018,928	(127,409)
Convertible debentures converted into common shares	(521,136)	(762,847)
Renewal of convertible debentures	(16,804)	(26,752)
Foreign exchange loss (gain)	195,444	92,653
Balance - end of period	<u>\$ 3,239,483</u>	<u>\$ 3,615,080</u>

⁽ⁱ⁾ Proceeds net of original issue discount of \$92,200.

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18. Key management compensation and related party transactions

The Company reports the following related party transactions:

(a) Key management compensation

Key management personnel are persons responsible for planning, directing and controlling activities of the Company, including officers and directors. Compensation paid or payable to these individuals (or companies controlled by such individuals) are summarized as follows:

	<u>2021</u>	<u>2020</u>	<u>2019</u>
Professional, other fees, and salaries	\$ 107,201	\$ 17,517	\$ 4,684
Stock-based compensation	227,500	-	-
	<u>\$ 334,701</u>	<u>\$ 17,517</u>	<u>\$ 4,684</u>

In 2021, these parties were awarded 5 million stock options with a weighted average exercise price of \$0.05 (2020 - nil; 2019 - nil).

(b) Trade payables and other liabilities

As described in Note 19(b) below, the Company has reversed this reserve in the fiscal year ended October 31, 2020 based on the developments in this legal matter in 2020. The reasonable value of Mr. Van Fleet's claims against the Company as of October 31, 2021 is \$nil (2020 - \$nil).

In 2021, the Company has reversed certain amounts totalling \$422,982 due to the payables being statute barred. These balances carried forward from prior years and the Company eliminated these balances in 2021.

(c) Convertible debentures

In May 2019, the CEO of the Company provided for a short-term loan of \$15,000 CDN (\$11,450 USD). At October 31, 2019, \$10,000 CDN (\$7,582 USD) in loan principal was outstanding. In 2020, the remaining amount of loan principal was extinguished by participation of the CEO in the private placement which the Company completed at the time (Note 12(b)(ii)). The extinguishment of the debt for the shares received in the private placement resulted in an a loss on conversion of \$14,000 CDN (\$10,600 USD).

In January 2018, the CEO of the Company provided for a convertible debenture of \$150,000 CDN (\$114,086 USD). As at October 31, 2021, \$9,483 CDN (\$7,657 USD) (2020 - \$10,001 CDN (\$7,509 USD)) in loan principal remains outstanding.

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19. Contingencies

- (a) The Company has agreed to indemnify its directors and officers and certain of its employees in accordance with the Company's by-laws. The Company maintains insurance policies that may provide coverage against certain claims.
- (b) The Company has previously reported on the lawsuit filed by Mr. Steven Van Fleet against Micromem, the Company's response to the lawsuit and its counterclaims against Mr. Van Fleet.

On April 29, 2021 the matter was resolved in Micromem's favor when the Court dismissed Mr. Van Fleet's claims and ruled that he was liable to the Company and to MAST on their counterclaims. An inquest hearing to determine damages was held in June 2021.

On June 16th, the Court ruled that Micromem and MAST had established damages totaling \$765,579 representing the full amount that had been requested; furthermore, the Court awarded costs and statutory prejudgment interest from May 9, 2017. On June 29, 2021 the Court entered a judgement in favor of Micromem and MAST for a total amount of \$1,051,739.

The Company is now pursuing collection of the judgement award. It will report the recovery of this contingent asset as funds are received. As at October 31, 2021, the Company has recorded recovery of \$40,000 received in the period as a reduction of legal expenses.

20. Financial risk management

- (a) Currency risk

Currency risk is the risk that the fair value of, or future cash flows from, the Company's financial instruments will significantly fluctuate due to changes in foreign exchange rates. The Company is exposed to currency risk to the extent that it incurs expenses and issues convertible debentures denominated in Canadian dollars (CDN). The Company manages currency risk by monitoring the Canadian position of these monetary financial instruments on a periodic basis throughout the course of the reporting period.

As at October 31, 2021, balances that are denominated in CDN are as follows:

	CDN	
	2021	2020
Cash (bank indebtedness)	\$ 55,950	\$ 8,759
Prepaid expenses and other receivables	\$ 29,857	\$ 33,594
Trade payables and other liabilities	\$ 17,366	\$ 23,530
Convertible debentures (carrying value)	\$ 1,093,684	\$ 2,176,454
Derivative liabilities	\$ 693,143	\$ 260,692
Long-term loan	\$ 60,000	\$ 40,000

A 10% strengthening of the US dollar against the CDN would decrease accumulated deficit by \$129,992 as at October 31, 2021 (2020 - decrease accumulated deficit by \$169,114). A 10% weakening of the USD against the CDN would have had the opposite effect of the same magnitude.

- (b) Interest rate risk

Interest rate risk is the risk that the fair value of, or future cash flows from, the Company's financial instruments will significantly fluctuate due to changes in market interest rates. The Company is exposed to interest rate risk on its interest-bearing convertible debentures. This exposure is limited due to the short-term nature of the convertible debentures.

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20. Financial risk management (continued)

(c) Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they become due. The Company's policy is to review liquidity resources and ensure that sufficient funds are available to meet financial obligations as they become due. Further, the Company's management is responsible for ensuring funds exist and are readily accessible to support business opportunities as they arise. The Company's funding is provided in the form of capital raised through the issuance of shares on conversion of convertible debentures. With the exception of the long-term loan, all financial liabilities are due within 1 year as at October 31, 2021.

(i) Trade payables

The following represents an analysis of the maturity of trade payables:

	<u>2021</u>	<u>2020</u>
Less than 30 days past billing date	\$ 384,057	\$ 252,413
31 to 90 days past billing date	-	25,683
Over 90 days past billing date	-	489,853
	<u>\$ 384,057</u>	<u>\$ 767,949</u>

As at October 31, 2021, trade payables include \$nil (2020 - \$367,418) of invoices which the Company has disputed and/or are statute barred. The Company does not anticipate that it will be required to discharge such amounts.

(ii) Convertible debentures and derivative liabilities

The following represents an analysis of the maturity of the convertible debentures and derivative liabilities:

	<u>2021</u>		<u>2020</u>	
	Convertible debentures	Derivative liabilities	Convertible debentures	Derivative liabilities
Less than three months	\$ 1,609,762	\$ 238,802	\$ 1,335,853	\$ 149,827
Three to six months	842,451	414,602	806,477	190,055
Six to twelve months	189	133,677	939,188	193,680
	<u>\$ 2,452,402</u>	<u>\$ 787,081</u>	<u>\$ 3,081,518</u>	<u>\$ 533,562</u>

(d) Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's cash and other receivables. The maximum exposure to credit risk is the carrying value of these financial assets, which amounted to \$189,407 as at October 31, 2021 (2020 - \$213,695).

Cash of \$171,397 as at October 31, 2021 (2020 - \$191,479) is held with central banks and financial institution counterparties that are highly rated. The Company has assessed no significant change in credit risk and an insignificant loss allowance, which was not recognized in these consolidated financial statements.

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21. Fair value hierarchy

Assets and liabilities recorded at fair value in the consolidated statements of financial position are classified using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The fair value hierarchy has the following levels:

Level 1 - valuation based on quoted prices (unadjusted) in active markets for identical assets and liabilities. There are no assets or liabilities in this category in these consolidated financial statements.

Level 2 - valuation techniques based on inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. In these consolidated financial statements, derivative liabilities are included in this category.

Level 3 - valuation techniques using the inputs for the asset or liability that are not based on observable market data. There are no assets or liabilities in this category in these consolidated financial statements.

The Company's policy for determining when transfers between levels of fair value hierarchy occur is based on the date of the event or changes in circumstances that caused the transfer. During the years ended October 31, 2021 and 2020, there were no transfers between levels.

22. Capital risk management

The Company's objectives when managing capital are to (i) maintain its ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders, (ii) ensure it has sufficient cash resources to further develop and market its technologies and (iii) maintain its ongoing operations. The Company defines its capital as its net assets, total assets less total liabilities. In order to secure the additional capital necessary to pursue these objectives, the Company may attempt to raise additional funds through the issuance of equity or convertible debentures or by securing strategic partners. The Company is not subject to externally imposed capital requirements and there has been no change with respect to the overall capital risk management strategy during the year ended October 31, 2021.

23. Subsequent events

Subsequent to October 31, 2021:

- (a) The Company secured two (2) private placements with investors consisting of common shares with no warrants pursuant to prospectus and registrations set forth in applicable securities law. It realized net proceeds of \$126,500 CDN (\$101,590 USD) and issued a total of 2,300,000 common shares.
- (b) The Company secured \$351,000 USD in convertible debentures with a 12 month term and conversion features which become effective six months after initiation date.
- (c) The Company converted \$177,320 USD of convertible debentures through the issuance of 4,593,480 common shares.
- (d) The Company repaid \$45,827 CDN (\$36,945 USD) of interest accrued on a convertible debenture.
- (e) The Company extended convertible debentures that were within 3 months of maturity date from October 31, 2021 for an additional (6) months.
- (f) The Company issued 413,674 common shares for settlement of \$28,957 CDN (\$22,460 USD) of debt.
- (g) The Company granted 25,000 options on December 15, 2021 at a strike price of \$0.09 CDN, expiring on December 15, 2023.