



**ECOGRA LIMITED**

**DIRECCIÓN GENERAL DE ORDENACIÓN DEL JUEGO  
DEFINITIVE FUNCTIONALITY CERTIFICATION REPORT:  
SLOTS SINGLE LICENSE**

**FOR**

**ALCHEMYBET LTD**

**PLATFORM TYPES:**

**MOBILE WEB ACCESS CLIENT (HTML5)**

**DESKTOP WEB ACCESS CLIENT (HTML5)**

**ISSUE DATE: 27/03/2023**

**REPORT CODE: E233518GRLESPM**

**PLEASE NOTE THAT THIS GAME CERTIFICATION SUPERSEDES THE PREVIOUSLY  
ISSUED REPORT NUMBER: E233399GRLESPM**

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## 1. IDENTIFICATION OF THE CERTIFICATION

Type of certification report:	Definitive functionality certification report
Report's identification code:	e233518GRLESPM
Related licence:	Not applicable
Licence Holder:	Not applicable
Platform Supplier:	Not applicable
Core Game Supplier(s):	AlchemyBet Ltd
Aggregator:	Not applicable
Aggregation Platform:	Not applicable
Scope of Testing:	Game engine and functional evaluation of new game
Certification entity name and address:	eCOGRA Limited, trading as 'eCOGRA' 2/F Berkeley Square House Berkeley Square London W1J 6BD United Kingdom
Authorised signatory name:	Bradley Khoury
Authorised signatory designation:	Chief Technical Officer and Director
Report issue date:	27 March 2023

The definitive functionality certification testing as outlined in this certification report was conducted between 07 March 2023 and 27 March 2023.

I hereby certify that, unless otherwise stated in the sections below, the items listed as tested in this report comply with the relevant requirements of *"Resolution of 6 October 2014, from the directorate general for the regulation of gambling, approving the regulation setting forth the form and content of the final certification report on the technical systems of gambling operators and elaborates on the change management procedure."*

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Bradley Khoury  
Chief Technical Officer and Director

## 2. DESCRIPTION OF THE OBJECT OF CERTIFICATION

eCOGRA was appointed by AlchemyBet Ltd to perform a compliance evaluation of the technical elements employed by the technical gaming system for the performance and operation of the gaming activity subject to the single licence requirements.

The testing included an evaluation of the following software components:

Company Name of Supplier	Software Element Name	Version	Hash sum (SHA1)
AlchemyBet Ltd	ChanceEngine.class	1.5.0	F13C9090CCC0FAA67602EEA89FB44EAAD4A52C1A
	SlingoPiratesTreasureEngine.class	1.5.0	A5C898FBBA9B9DA6861FAFFF2279C38E436BF236
	battle-piratest treasure-1-config.yml	1.5.0	421E2E0F314418997D6F723D45F32A1F9B8A6367
	battle-piratest treasure-2-config.yml	1.5.0	A758CB387AAE10455261A8E06FCA149B77E64548
	battle-piratest treasure-3-config.yml	1.5.0	ED10A13EFE5F84792DA56A0ED9536AD90FBF3072
	battle-piratest treasure-4-config.yml	1.5.0	C79EB6043777E6BFBB600DA523115E9367D87168
	battle-piratest treasure-5-config.yml	1.5.0	76378090A6EB70C77A3D4FB86E19E3C5D5D64C91
	battle-piratest treasure-6-config.yml	1.5.0	5117EDE31518B1906E2CA626959EDF0CE8F1F79F
	chance-piratest treasure-diamond-config.yml	1.5.0	DDE34FA68B50BD1F6593B5CA0B7049E3D209A4D0
	chance-piratest treasure-gold-config.yml	1.5.0	831D849E67563BBAA7A54FC1DF396442CC2E426E
	chance-piratest treasure-ruby-config.yml	1.5.0	B210BA96B44C863DD01C53DCEEFDF07678286B53
	slingo-piratest treasure-config.yml	1.5.0	BBFC70E61291EECB4499EDAAC060800A92EDDB06
	slingo-piratest treasure-prices.csv.gz	1.5.0	1414088711EF75C5364727F2F529DB4467F796F5
	BattleEngine.class	1.5.0	1F8B5F56B822FF67A2E5719B35D509E03295E20B
SlingoEngine.class	1.5.0	e8F4516E8A9C1656E8884E3716077E85CCA7738F	

The testing included an evaluation of the technical infrastructure located at the following data processing centres:

Data Processing Centre	Street Number	City	Country	Type	Trade name of the housing supplier (external supplier)
DPC 1	Unit AF1 Clonshaugh Industrial Estate	Dublin 17	Ireland	Hosting	Amazon Data Services Ltd
DPC 2	30A Greenhills road Tallaght	Dublin 24	Ireland	Hosting	Amazon Data Services Ltd

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The following websites and commercial names formed part of the scope of the certification testing:

Website URL	Commercial Name or Trademark	Role of the Operator	Relevant Products Offered	Languages Offered	Certified Access Channels
<a href="https://alchemy-sta.gamingrealms.net/rgs/test/rgs-test.html">https://alchemy-sta.gamingrealms.net/rgs/test/rgs-test.html</a>	<i>AlchemyBet Ltd</i>	B2B	Slots/Other	Spanish	Internet (HTML5)

Game, modalities and variants that are within the scope of the certification:

Game Name (Manufacturer)	Commercial Game Name (Operator)	Game Variant Type	Client Access Application (Technology for Access)
<i>Slingo Pirates Treasure</i>	<i>Slingo Pirates Treasure</i>	Not Applicable	HTML5-PC
Slingo Pirates Treasure	Slingo Pirates Treasure	Not Applicable	HTML5-Mobile

### 3. EXECUTIVE SUMMARY OF FUNCTIONALITY CERTIFICATION

#### 3.1 Overall rating of the functionality.

Overall rating of the functionality	Compliant		
	"Compliant"	"Does not comply"	"Not applicable"
97	29	0	68

#### 3.2 Table summarising compliance with technical requirements.

Reference	Number of requirements	Number of compliant requirements	Number of non-compliant requirements	Number of non-applicable requirements
<b>Technical requirement areas for single licenses</b>				
Area: Percentage return and prize schedules	3	3	0	0
Area: Random number generator	6	5	0	1
Area: Gaming logic	3	2	0	1
Area: Recording and traceability	4	0	0	4
Area: Terminals and session	13	2	0	11
Area: Communication channels	5	0	0	5
Area: Free gaming applications	1	0	0	1
Area: Graphic interface	7	4	0	3
Area: Behaviour in the event of technical errors	2	0	0	2
Area: Automated gaming activity	1	0	0	1
Area: Replay	1	1	0	0
Area: "Live" gaming	1	0	0	1
Area: Miscellaneous functionalities	5	0	0	5
Area: Progressive jackpots	1	0	0	1
Area: Internal control system	10	0	0	10
<b>Technical requirement areas for Online Slot-machine licences</b>				
Area: Configuration and realisation of the online slot-machine game session.	7	0	0	7
Area: Duties of informing participants in relation to the gambling session intended for online slot-machines	4	0	0	4
Realisation of the gambling activity	12	8	0	4
Area: Duties of informing participants.	10	4	0	6
Area: Promotion of gambling activities	1	0	0	1

### 3.3 Table summarising specific tests.

<b>3.3.1 Analysis of identity checks and prohibition verifications</b>
Not applicable to single licences.

<b>3.3.2 Analysis of the random number generator</b>	
Please note that the testing below applies to all games, modalities and variants as indicated in Section 2 above:	
<b>Analysis Requirement</b>	<b>Observation</b>
Rating	Compliant
Manufacturer	AlchemyBet Ltd
Product and Version	AlchemyBet RNG v1.0.51
Digital Fingerprint	RNG.class 24B872CCAC8D36C4D5694CC5D523E8B0E19846B3 SecureRNG.class C051B2292F000AFCC6CC782D581BA6507B83817D
Type of RNG	Software RNG.
Random/Pseudo-random	Pseudorandom
Shared RNG	Instance of RNG shared with other games on the server.
Algorithm	SecureRandom using SUN SHA1PRNG
Reseeding	Reseeding procedure is included: Yes.
Length of space	Length in bits of the space of different random numbers.
List of statistical tests	NIST, Diehard, Frequency test, Serial test, Gap test, Poker test, Permutations test, Runs test

<b>3.3.3 Percentage return to gamer analysis.</b>		
Please note that the testing below applies to all games, modalities and variants as indicated in Section 2 above:		
<b>Game</b>	<b>Theoretical Percentage Return to Player<sup>1</sup></b>	<b>Medium Where Theoretical Percentage Return is Published</b>
<i>Slingo Pirates Treasure (Desktop HTML5)</i>	<i>Base game: 94.17%</i> <i>Extra Spins: 93.98%</i>	Game rules
<i>Slingo Pirates Treasure (Mobile HTML5)</i>		

<b>3.3.4 Analysis of gaming logic and random events.</b>	
Please note that the testing below applies to all games, modalities and variants as indicated in Section 2 above:	
<b>Analysis Requirement</b>	<b>Observation</b>
Compliance with specific gaming rules.	Yes
System of risk management for bets with a bookmaker.	Not applicable to this license.
Audit of changes to the configuration through	Not applicable to this license.

<sup>1</sup> Refers to the RTP variant of the games certified at integration. Other RTPs versions (as documented in supplier certifications) are not relevant to the intended product offering.



parameters of the risk management system in relation to bets with a bookmaker.	
Audit of changes made on the bets by the operator's staff.	Not applicable to this license.
List of random events.	Game outcomes are only solely dependent on the RNG output and results are not pre-sorted.
Audit of changes in the configuration through gaming logic parameters.	Yes

### **3.3.5 Measures against fraud and money laundering**

Not applicable to single licences.

**3.4 Table summarising integration testing.**

Reference	Area of requirements	Rating
<b><i>B.1 Gaming Offering</i></b>		
B.1.1.	Offering of gaming activities and variants.	Not applicable
B.1.2	Performance of the gaming activity and proper accounting.	Not applicable
B.1.3	Audit trails on participation through channels other than the Internet	Not applicable
<b><i>B.2 Economic limits on participation</i></b>		
B.2.1	Economic limits on participation.	Not applicable
<b><i>B.3. Behaviour in the event of technical errors.</i></b>		
B.3.1	Loss of communications with the client.	Not applicable
B.3.2	Error in the client.	Not applicable
<b><i>B.4. Internal control system.</i></b>		
B.4.1	Integrity of OPT/ORT registers.	Not applicable
B.4.2	Integrity of JUT/JUD registers.	Not applicable

#### 4. DETAILS OF COMPLIANCE WITH THE TECHNICAL REQUIREMENTS

Please note that the testing below applies to all games, modalities and variants as indicated in Section 2 above:

Reference	Description	Rating	Observations
<b>Area: Percentage return and prize schedules</b>			
RES_TEC Annex I. 3.1	Basic regulations of the gambling activity.	Compliant	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.3	Return percentage to the participant	Compliant	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.4	Prize tables	Compliant	The scope of assessment is limited to aspects directly managed by the Supplier.
<b>Area: Random number generator</b>			
RES_TEC Annex I. 3.5.1	Functioning of the RNG	Compliant	Refer to RNG report 563-GR1-20-02-385
RES_TEC Annex I. 3.5.1 (crypto. strong)	Cryptographically strong RNG	Compliant	Refer to RNG report 563-GR1-20-02-385
RES_TEC Annex I. 3.5.2	Scaling methods	Compliant	Refer to RNG report 563-GR1-20-02-385
RES_TEC Annex I. 3.5.3	RNG hardware	Not Applicable	The licensee utilises a software RNG.
RES_TEC Annex I. 3.5.4	Faults in the RNG	Compliant	Refer to RNG report 563-GR1-20-02-385
RES_TEC Annex I. 3.5.5	Reseeding of the RNG	Compliant	Refer to RNG report 563-GR1-20-02-385
<b>Area: Gaming logic</b>			
RES_TEC Annex I. 3.6.1	Logic independent of the user terminal	Compliant	Refer to RNG report
RES_TEC Annex I. 3.6.2	Application of the RNG to gambling activities	Compliant	563-GR1-20-02-385
RES_TEC Annex I. 3.6.3	Game logic controls.	Compliant	Refer to RNG report
<b>Area: Recording and traceability</b>			
RD_TEC Article 4.1.a) and c)	Requirements for the Central Gaming Unit. Gaming activities.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 6.1	Recording and traceability	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 6.3	Time source	Not Applicable	Not applicable for slot machine games
RES_TEC Annex I. 7.5	Registration and traceability of international liquidity environment	Not Applicable	Not applicable for slot machine games

Reference	Description	Rating	Observations
<b>Area: Terminals and session</b>			
RES_TEC Annex I. 3.7.1.1	Terminal identification	Not Applicable	Note: The licensee does not have physical terminals.
RES_TEC Annex I. 3.7.1.2	Terminal functionality Traceability of operations.	Compliant	
RES_TEC Annex I. 3.7.2.1	Component installation on the user's terminal.	Not Applicable	There are no downloadable elements for the games under review.
RES_TEC Annex I. 3.7.2.2	Disadvantage due to connection quality.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.7.2.3	Information on connection quality.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.7.2.4	Reduced functionality for certain user terminals.	Compliant	
RES_TEC Annex I. 3.7.2.5	Minimum resources of the terminal.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.7.3.1	Processing of participant details.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.7.3.2	Physical design	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.7.3.3	Terminal integrity.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.7.3.4	Mobile terminals.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.8.1	Disconnection due to inactivity	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.8.2	Record of user sessions.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
<b>Area: Communication channels</b>			
RD_TEC Article 15.1 and 15.2	Gaming activities performed over the Internet	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.2	Redirection to the <<.es>> domain name.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.

Reference	Description	Rating	Observations
RD_TEC Article 16	Gaming activities performed through landline or mobile telephony text messaging services	Not Applicable	The licensee does not offer gaming activities through landline or mobile telephony text messaging.
RD_TEC Article 17	Gaming activities through voice communication services	Not Applicable	The licensee does not offer gaming activities through voice communication services.
RD_TEC Article 18	Gaming activities through audio visual media	Not Applicable	The licensee does not offer gaming activities through audio visual communication media.
<b>Area: Free gaming applications</b>			
RD_COM Article 14.1	Free gambling applications	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
<b>Area: Graphic interface</b>			
LEY_RJU Art. 6.1.a	Subject of the user interface	Compliant	
RES_TEC Annex I. 3.9.1	Gambling details	Compliant	
RES_TEC Annex I. 3.9.2	Participant's data	Compliant	
RES_TEC Annex I. 3.9.3	Prizes	Compliant	
RES_TEC Annex I. 3.9.4	Card games	Not Applicable	No card features are offered in the games under review.
RES_TEC Annex I. 3.9.5	Simulation of real-life features	Not Applicable	There are no simulations of physical devices for the games under review.
RES_TEC Annex I. 3.9.6	Third-party graphic interface	Not Applicable	The licensee does not facilitate the use of third-party interfaces.
<b>Area: Behaviour in the event of technical errors</b>			
RES_TEC Annex I. 3.11	Disabling a gaming activity or a user session	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 3.12	Incomplete game	Compliant	The scope of assessment is limited to aspects directly managed by the Supplier.
<b>Area: Automated gaming activity</b>			
RES_TEC Annex I. 3.13	Automatic gambling.	Not Applicable	Not applicable to this game type
<b>Area: Replay</b>			
RES_TEC Annex I. 3.14	Move repetition.	Compliant	
<b>Area: "Live" gaming</b>			
RES_TEC Annex I. 3.19	Real-time gambling	Not Applicable	The games under review are not "live" in nature.
<b>Area: Miscellaneous functionalities</b>			

Reference	Description	Rating	Observations
RES_TEC Annex I. 3.15	Virtual gamers	Not Applicable	The games under review do not feature virtual players.
RES_TEC Annex I. 3.16	Metamorphosis games.	Not Applicable	The games under review are not metamorphic in nature.
RES_TEC Annex I. 3.17	Absent participant.	Not Applicable	The games under review do involve more than one participant.
RES_TEC Annex I. 3.18	Hosted multiplayer games.	Not Applicable	The games under review do involve more than one participant.
RES_TEC Annex I. 3.21	Gambling through pre-recorded communication channels.	Not Applicable	The games under review do not generate outcomes prior to the game round.
<b>Area: Progressive jackpots</b>			
RES_TEC Annex I. 3.20	Jackpots, progressive jackpots and additional prizes	Not Applicable	The games under review do not have jackpots, progressive jackpots or additional prizes.
<b>Area: Internal control system</b>			
RD_TEC Article 13	The internal control system (SCI)	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
RES_TEC Annex I. 5.1.2	DGOJ access to storage files.	Not Applicable	
RES_TEC Annex I. 5.1.3	Data model for the SCI	Not Applicable	
RES_TEC Annex I. 5.1.4	Time source of the SCI	Not Applicable	
RES_TEC Annex I. 5.1.5	Signature, compression and encryption of SCI data	Not Applicable	
RES_TEC Annex I. 5.1.6	Efficiency of the data capturer and storage system.	Not Applicable	
RES_TEC Annex I. 5.1.8	Unavailability of the SCI and suspension of gambling on offer.	Not Applicable	
RES_TEC Annex I. 5.1.11	Information quality of the SCI.	Not Applicable	
RES_TEC Annex I. 5.1.14	Location of storage system in Spain.	Not Applicable	
RES_MOD Annex I.	Data model for monitoring	Not Applicable	

**Technical Requirements for Slots Single License:**

Reference	Description	Rating	Observations
<b>Area: Configuration and realisation of the online slot-machine game session</b>			
OM_AZA Article 12.2.	Monetary limits for participation in the Online Slot-machine game during an online slot-machine game session	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 14.1.	Configuration and development of slot machines session.	Not Applicable	

Reference	Description	Rating	Observations
OM_AZA. Article 14.1.	The operator notifies the participant of approaching limits.	Not Applicable	
OM_AZA. Article 14.1.	Compulsive gambling warning on restarting a session within 60 minutes.	Not Applicable	
OM_AZA. Article 14.2.	Possibility of restricting future sessions.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 14.3.	Configuration of warning frequency. Minimum interval.	Not Applicable	
RES_TEC Anexo I. 2.1.14	Record of session configurations for slot machine gambling.	Not Applicable	
<b>Area: Duties of informing participants in relation to the gambling session intended for online slot-machines</b>			
OM_AZA. Article 8.1.2 i	Balance, wagered total and winnings total.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 8.1.2 j	History record of sessions, with breakdown.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 8.2	Periodic warnings for spent time and amount.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 13.2.	Accrediting document at the session's end, with breakdown	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
<b>Area: Realisation of the gambling activity</b>			
OM_AZA. Article 2.	Definitions.	Compliant	
OM_AZA. Article 6.	Particular rules for "online slot machine" game	Compliant	
OM_AZA. Article 11.	Realisation of the "Online Slot-machine" game.	Compliant	
OM_AZA. Article 12.1	Economic limits on participation in slot machine gaming.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 13.1.	Participation in the "Online Slot-machine" game	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 13.3.	Participation in the "Online Slot-machine" game. Session or spin interruption.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.

Reference	Description	Rating	Observations
OM_AZA. Article 13.4.	Participation in the game of "Slot machines". Game cancelled.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 14.4.	Limit on games in automatic game.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 14.5.	Minimum duration of spin	Compliant	
OM_AZA. Article 14.6.	Allocation of prizes.	Compliant	
OM_AZA. Article 14.7.	jackpots.	Not Applicable	The game variants tested did not include Jackpots, progressive jackpots, or additional prizes.
OM_AZA. Article 15.	Payment of winnings.	Compliant	
<b>Area: Duties of informing participants.</b>			
OM_AZA. Article 8.1.1	Publication of particular rules.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 8.1.2.a)	Operator and licence details.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 8.1.2.b)	Claim details.	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 8.1.2.c)	Rules and methods of participation.	Compliant	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 8.1.2.d)	Responsible gambling policies	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.
OM_AZA. Article 8.1.2.e)	Theoretical and real RTP for the last 6 months.	Not Applicable	The scope of assessment is limited to aspects directly managed by the supplier. Platform and operational functions have not been assessed.
OM_AZA. Article 8.1.2.f)	Max. and min. amount.	Compliant	
OM_AZA. Article 8.1.2.g)	Method of realisation.	Compliant	
OM_AZA. Article 8.1.2.h)	Description of combinations and winnings.	Compliant	
OM_AZA. Article 8.1.2.k)	Percentage dedicated to the jackpot.	Not Applicable	The game variants tested did not include Jackpots, progressive jackpots, or additional prizes.
<b>Area: Promotion of gambling activities</b>			



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Reference	Description	Rating	Observations
OM_AZA. Article 9.2	Promotion of gambling activities	Not Applicable	The scope of assessment is limited to aspects directly managed by the Supplier.

## 5. DETAILS OF THE SPECIFIC ANALYSES

<b>5.1 Analysis of identity checks and subjective prohibition verifications</b>
Not applicable to single slot licenses.

<b>5.2 Analysis of the random number generator</b>	
<i>This analysis shall solely apply for single licences for which a random number generator, or RNG, is used.</i>	
<p>The Random Number Generators used for new integrated games are hosted by AlchemyBet Ltd For the tests carried out, see the reports:</p> <ul style="list-style-type: none"> <li>➤ RN-563-GR1-20-02-385</li> </ul>	
Description of the analyses, assays or tests conducted to verify the RNG's random behaviour and compliance with technical requirements:	Refer to report RN-563-GR1-20-02-385
Detail of the justification of summaries and graphics:	Refer to report RN-563-GR1-20-02-385
Detail of the number of simulations conducted:	Refer to report RN-563-GR1-20-02-385
Detail of the parameters used and the confidence interval:	Refer to report RN-563-GR1-20-02-385
Detail of reseeding procedures and compliance with technical requirements:	Refer to report RN-563-GR1-20-02-385
Detail of configuration parameters upon which the RNG's functioning depends:	Refer to report RN-563-GR1-20-02-385
Detail of the configuration values used in the certification tests:	Refer to report RN-563-GR1-20-02-385

<b>5.3 Analysis of the gaming activities' return to gamer.</b>	
The certification entity shall set forth the percentage return to gamer published by the operator for each gaming activity. It shall also verify the site where the aforementioned percentage is published:	Refer to section 3.3.3 "Percentage Return to Gamer Analysis" above for detail requested.
Detail of the configuration parameters which may affect the percentage return to gamer	There are no configurable parameters which may affect the percentage return to gamer. In the unlikely event of any changes to such parameters, this would result in an entirely new game.
Detail of whether the technical gaming system allows for the audit trails of changes made to such parameters to be recorded	Changes to parameters affecting the percentage return to gamer undergo the full Change Management cycle and would be logged through Change Management procedures.

<b>5.4 Analysis of gaming logic and random events.</b>	
<p><i>The certification entity shall accredit that the performance of the gaming activity complies with the specific rules for each of the gaming variants. The certification entity shall analyse certain aspects of the gaming logic, the random events in the gaming activity, configurations which may be parameterised, the gaming activity's accounting and, in general terms, the capacity to audit any manual changes made to bets or to winners.</i></p>	
<b>Gaming machines</b>	
Description of the random events in the gaming activity in which the random number generator is involved.	<p>The RNG numbers are used to determine the results of the following events:</p> <ul style="list-style-type: none"> <li>• Base game spinning of the reels in gaming machines;</li> <li>• Free spins</li> <li>• Bonus rounds; and</li> <li>• Other special game features.</li> </ul> <p>None of these events are pre-sorted. Refer to report RN-563-GR1-20-02-385</p>
Description of the accounting management of games (including progressive jackpots if applicable):	Not applicable. The scope of assessment is limited to aspects directly managed by the supplier. Platform and operational functions have not been assessed.
Description of the internal auditing procedures (logging etc) over amounts wagered, the prizes obtained, the commission fees calculated and the progressive jackpots created or applied.	Not applicable. The scope of assessment is limited to aspects directly managed by the supplier. Platform and operational functions have not been assessed.
<b>Auditing of games</b> Explanation of records and audit trails over changes made to applications from the back office or by the operator's personnel:	Not applicable. The scope of assessment is limited to aspects directly managed by the supplier. Platform and operational functions have not been assessed.

Detail of controls to prevent unauthorised manipulation of database files including audit/change logs.	Not applicable. The scope of assessment is limited to aspects directly managed by the supplier. Platform and operational functions have not been assessed.
Detail of the location of database files and tables of where the audit logs are kept.	Not applicable. The scope of assessment is limited to aspects directly managed by the supplier. Platform and operational functions have not been assessed.
<p>Is the software used to implement the gaming logic configurable?          If yes, detail of the value of the configuration parameters connected with the following aspects (Provide the name of the relevant audit log for each parameter as applicable):</p>	
➤ Modes of play:	Not applicable. Gaming modalities are predefined and cannot be configured through the back office. Any changes to a particular gaming modality or introduction of a new gaming modality would follow the organisational change management process.
➤ Game strategy of the bank or level of risk assumed:	Not applicable to slot games.
➤ Maximum amounts:	Not applicable. Maximum amounts are predefined and cannot be configured through the back office. Any changes to maximum amounts would follow the organisational change management process.
➤ Rules of play:	Not applicable. The programmed gaming rules are not configurable through the back office. Any changes to the programmed gaming rules would need to follow the organisational change management process for system developments. Any changes to the specific rules over games that are posted on the operator's website would also need to follow the organisational change management process.
Details of audit registry for changes to parameters:	Not applicable. The scope of assessment is limited to aspects directly managed by the supplier.

<b>5.5 Measures against fraud and money laundering.</b>
Not applicable to single licenses.

## 6. DETAILS OF INTEGRATION TESTS

Area.	B.1. Gaming offering.
<b>Test reference.</b>	B.1.1
<b>Name of test.</b>	Offering of gaming activities and variants.
<b>Description of test.</b>	<p>From the gamer interface, access shall be gained to the offering of gaming activities corresponding to the single licence.</p> <p>The available gaming activity offering shall be analysed for each of the different participation applications or terminals.</p> <p>Each of the gaming activities and variants on offer shall be analysed, seeking to verify equivalence with the gaming activities and variants allowed by the basic regulation.</p> <p>Playing the gaming activities is not required to conduct this test, but rather analysing the information posted by the operator, be it informative information or gaming rules.</p>
<b>Expected outcome.</b>	<p>The following information shall be listed in the results:</p> <ul style="list-style-type: none"> <li>• the commercial name of the gaming activities and variants found</li> <li>• the applications or terminals from which they are available.</li> <li>• Equivalence/relationship with the variants set forth in the basic regulation.</li> <li>• the version of the specific rules assessed.</li> </ul> <p>This information shall be compared to the descriptive questionnaire on the licence filled in by the operator.</p>
<b>Type of test.</b>	FUNCTIONAL
<b>Date/time test was conducted.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Outcome obtained.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Rating.</b>	Not applicable
<b>Observations.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.

Area.	B.1. Gaming offering.
<b>Test reference.</b>	B.1.2
<b>Name of test.</b>	Performance of the gaming activity and proper accounting.
<b>Description of test.</b>	<p>From the gamer interface, the certification entity shall participate in the gaming activity, verifying the following:</p> <ul style="list-style-type: none"> <li>• the proper accounting of bets, prizes, commission fees or other.</li> <li>• in the case of gaming activities having an operator's commission fee, it shall be verified that the calculation of such fees is in accordance with the specific rules.</li> <li>• an attempt shall be made to take part with an amount exceeding the available balance in the gaming account.</li> </ul> <p>In the case of specific gaming activities, the following shall be verified:</p>

	<ul style="list-style-type: none"> <li>• As regards betting activities, that wagers cannot be placed at moments not foreseen in the specific rules and, in particular, subsequent to the end of commercialisation, after the event has begun in conventional betting activities, or after the end of the event for live betting.</li> <li>• As regards bingo, that bingo cards cannot be bought outside the commercialisation period or once the game has begun.</li> <li>• As regards poker or casino, that wagers cannot be placed outside the moments designated for placing wagers in the specific rules.</li> <li>• For slot machines, a test will be carried out to make sure that when the slot machine game session ends automatically as soon as the predetermined time is up or as soon as the configured set amount for this session has been reached, the game that is in progress ends in an orderly fashion, and the accounting of such is correct.</li> </ul> <p>NOTE: This test shall be repeated for the different participation applications or terminals, as well as for each of the gaming activities, variants or modalities.</p>
<b>Expected outcome.</b>	<p>FUNCTIONAL</p> <p>Conformity of the aforementioned verifications, broken down by each variant analysed. It shall be verified that it is not possible to take part with an amount exceeding the available balance in the gaming account.</p> <p>Likewise, the version of the specific rules assessed shall be stated.</p> <p>TRACEABILITY</p> <p>The tables, files or other elements containing the information shall be stated in the results.</p> <p>An opinion shall be issued on whether the technical gaming system recording system allows one to retrieve information to explain each of the situations, as well as to totally reconstruct what has happened in each of the games.</p>
<b>Type of test.</b>	FUNCTIONAL, TRACEABILITY
<b>Date/time test was conducted.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Outcome obtained.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Rating.</b>	Not Applicable
<b>Observations.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.

<b>Area.</b>	<b>B.1. Gaming offering.</b>
<b>Test reference.</b>	B.1.3
<b>Name of test.</b>	Audit trails on participation through channels other than the Internet
<b>Description of test.</b>	Should they exist, the certification entity shall take part through each of the channels other than the Internet such as, for instance, SMS or by telephone.

<b>Expected outcome.</b>	<p>TRACEABILITY</p> <p>The system's records and audit trails for each of the participation channels used shall be analysed, verifying that in the <b>case</b> of SMS and by telephone that the system keeps data on:</p> <ul style="list-style-type: none"> <li>• date/time of each message sent or call made</li> <li>• telephone number that originated the message or call</li> <li>• contents of the message or call</li> </ul>
<b>Type of test.</b>	TRACEABILITY
<b>Date/time test was conducted.</b>	Not applicable as the operator does not offer participation through channels other than the Internet
<b>Outcome obtained.</b>	Not applicable as the operator does not offer participation through channels other than the Internet
<b>Rating.</b>	Not applicable
<b>Observations.</b>	Not applicable as the operator does not offer participation through channels other than the Internet

<b>Area.</b>	<b>B.2. Economic limits on participation.</b>
<b>Test reference.</b>	B.2.1
<b>Name of test.</b>	Economic limits on participation.
<b>Description of test.</b>	<p>It shall be verified whether the system complies with economic limits, such as: maximum participation and prize amounts.</p> <p>In order to do so, the certification entity shall participate in the gaming activity and attempt to exceed each of the limits set forth in the gaming activities' Ministerial Orders, as set forth in Section 2, Annex III.</p> <p>The slot machines will be tested to make sure that the system is in line with the established limits when starting the corresponding slot machine game session, both in terms of the financial limit and also the time limit. Moreover, a test will be done to make sure that the amount of money that a player can use in a slot machine game cannot exceed the amount that they have in their gaming account when they start the session on the slot machine, thus increasing the amount of the prize money won in this session.</p>
<b>Expected outcome.</b>	The tests conducted and the results obtained shall be stated.
<b>Type of test.</b>	FUNCTIONAL
<b>Date/time test was conducted.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Outcome obtained.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Rating.</b>	Not Applicable
<b>Observations.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.

<b>Area.</b>	<b>B.3. Behaviour in the event of technical errors.</b>
<b>Test reference.</b>	B.3.1
<b>Name of test.</b>	Loss of communications with customers.
<b>Description of test.</b>	<p>Tests shall be conducted to initiate a gaming activity and provoke a loss of communication with the central gaming unit.</p> <p>Communication shall be re-established after 1 minute, 5 minutes and 15 minutes have elapsed (different time intervals).</p> <p>The system's reaction to finalise the gaming activity and its compliance with the provisions set forth in the specific rules shall be analysed.</p> <p>This test shall be performed for each of the terminals, applications or clients, as well as for each of the gaming activities or modalities on offer.</p>
<b>Expected outcome.</b>	<p>Compliance with the specific rules shall be stated.</p> <p>The result obtained as regards the behaviour of each terminal, application or client, as well as for each gaming activity or modality shall be stated.</p> <p>The version of the specific rules analysed shall also be included.</p>
<b>Type of test.</b>	FUNCTIONAL
<b>Date/time test was conducted.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Outcome obtained.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Rating.</b>	Not Applicable
<b>Observations.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.



<b>Area.</b>	<b>B.3. Behaviour in the event of technical errors.</b>
<b>Test reference.</b>	B.3.2
<b>Name of test.</b>	Error in the client.
<b>Description of test.</b>	<p>A gaming activity shall be initiated and an unexpected shut down of the client terminal shall be provoked.</p> <p>The terminal shall be started up once again after 1 minute, 5 minutes or 15 minutes have elapsed (different time intervals).</p> <p>The system's reaction to finalise the gaming activity and its compliance with the provisions set forth in the specific rules shall be analysed.</p> <p>This test shall be performed for each of the terminals, applications or clients, as well as for each of the gaming activities or modalities on offer.</p>
<b>Expected outcome.</b>	<p>Compliance with the specific rules shall be stated.</p> <p>The result obtained as regards the behaviour of each terminal, application or client, as well as for each gaming activity or modality shall be stated.</p> <p>The version of the specific rules analysed shall also be included.</p>
<b>Type of test.</b>	FUNCTIONAL
<b>Date/time test was conducted.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Outcome obtained.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Rating.</b>	Not Applicable
<b>Observations.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.

<b>Area.</b>	<b>B.4. Internal control system.</b>
<b>Test reference.</b>	B.4.1
<b>Name of test.</b>	Integrity of OPT/ORT registers.
<b>Description of test.</b>	<p>The ICS data shall be compared to the data in the operator's information in this test in order to evaluate the Integrity of ICS data.</p> <p>The following monthly data for each month shall be obtained:</p> <ul style="list-style-type: none"> <li>• From the monthly OPT/ORT record:             <ul style="list-style-type: none"> <li>○ Participation</li> <li>○ Reimbursement of participation fees</li> <li>○ Prizes</li> <li>○ Prizes in kind</li> </ul> </li> </ul> <p>This test requires the certification entity to gain access to unencrypted real data. The operator shall provide accurate unencrypted monthly Operator Account total OPT/ORT files to the certification entity, so that it can make sure that these coincide with those that are really stored in the operator's information system.</p> <p>It shall not be necessary for the certification entity to gain access to any personal data.</p> <p>Under no circumstances shall it be necessary for the certification entity to know the encryption key.</p>
<b>Expected outcome.</b>	<p>The data from the OPT/ORT files shall be compared with the lists obtained from the technical gaming system's back office. This means that the certification entity has to check the veracity of these lists, as they are the source used to check the integrity of the real data from the ICS.</p> <p>As a result for this test, the certification entity shall include the following:</p> <ul style="list-style-type: none"> <li>- The conformity of the verifications conducted.</li> <li>- The following OPT/ORT data calculated from each month's monthly data:             <ul style="list-style-type: none"> <li>○ The quotient between the amount of prizes and the participation amount. (expressed in 4 decimal points).</li> </ul> </li> </ul> <p>NOTE: Direct turnover figures shall not be included in the result.</p> <p>NOTE: The verifications and calculations shall be done separately in both "EUR" monetary units as well as in any other kind of units, be they bonus points or other.</p>
<b>Type of test.</b>	REAL DATA
<b>Date test was conducted.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Outcome obtained.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Rating.</b>	Not Applicable

<b>Observations.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
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<b>Area.</b>	<b>B.4. Internal control system.</b>
<b>Test reference.</b>	B.4.2
<b>Name of test.</b>	Integrity of JUT/JUD registers.
<b>Description of test.</b>	<p>In this test the data from the ICS will be compared with the data from the operator's information system to evaluate the integrity of the data from the ICS.</p> <p>The following data will be obtained on a daily basis from the last 5 days prior to the performance of the test:</p> <p>From the JUD / JUT registers:</p> <ul style="list-style-type: none"> <li>• Number of plays of each kind of game</li> <li>• A random sample of 5 plays will be obtained and will be compared with the data from the operator's information system. For example, the participants, the prizes, the event in the case of bets or the number SMS in the case of a contest.</li> </ul> <p>The certification entity has to access accurate real data for this test. The operator must provide accurate JUT / JUD files to the certification entity so that it can make sure that these coincide with those that are really stored in the operator's information system.</p> <p>It shall not be necessary for the certification entity to gain access to any personal data.</p> <p>Under no circumstances shall it be necessary for the certification entity to know the encryption key.</p>
<b>Expected outcome.</b>	<p>The JUT/JUD files shall be compared with the lists obtained from the technical gaming system's back office. This means that the certification entity has to check the veracity of these lists, as they are the source used to check the integrity of the real data from the ICS.</p> <p>As a result for this test, the certification entity shall include the following:</p> <ul style="list-style-type: none"> <li>- The conformity of the verifications conducted.</li> </ul> <p>NOTE: Direct turnover figures shall not be included in the result.</p> <p>NOTE: The verifications and calculations shall be done separately in both "EUR" monetary units as well as in any other kind of units, be they bonus points or other.</p>
<b>Type of test.</b>	REAL DATA
<b>Date test was conducted.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.
<b>Outcome obtained.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.

<b>Rating.</b>	Compliant/Not Applicable
<b>Observations.</b>	Not applicable as AlchemyBet Ltd is a software provider and all integration test procedures are to be performed at the operator providing the games to players.

## 7. DESCRIPTION OF THE LOCATION, TEAM AND DATES OF PERFORMANCE OF THE CERTIFICATION

The certification testing was conducted remotely at the eCOGRA offices during the period 07 March 2023 to 27 March 2023.

The certification team consisted of:

<b>Name</b>	<b>Title</b>
Bradley Khoury	Chief Technical Officer
Tyrone Rajah	Data Team Lead
Thabang Maganedisa	Project Lead
Sumeshan Padayachee	Test Engineer
Tshavhungwa Mukhanu	Test Engineer
Ethic Hadebe	Test Engineer
Lungisani Mkhize	Data Analyst

**8. DESCRIPTION OF THE ENVIRONMENTS USED IN THE TESTS OTHER THAN THOSE EFFECTIVELY USED BY THE OPERATOR FOR THE DEVELOPMENT OF THE GAMING ACTIVITIES**

All tests were conducted on a pre-production environment that emulated the production environment.

Tests Conducted	Environment Tested
All tests of the technical requirements performed within the scope of the current definitive certification have been carried out in a testing environment.	<a href="https://alchemy-sta.gamingrealms.net/rgs/test/rgs-test.html">https://alchemy-sta.gamingrealms.net/rgs/test/rgs-test.html</a> Platform Version: Server: 1.5.0

## 9. DESCRIPTION OF THE DIGITAL MEDIA THAT WILL ACCOMPANY THE CERTIFICATION REPORT

List of supporting documentation included in the accompanying digital media file name "Certification Package – AlchemyBet Ltd":

File / Folder Name	Description
EN_e233518GRLESPM - AlchemyBet Ltd ESP Slingo Pirates Treasure (3 2023)	Full certification report in digital format.
Operator Descriptive Questionnaire	Descriptive questionnaire on the object of certification in digital format.
\Technical requirements	Evidence of assessment on the technical requirements. These shall be grouped together in a folder named "Technical requirements".
\Binaries	Copy of the technical gaming system's software elements, which shall contain a copy of the binary files and software elements of the certified technical system. They shall be grouped together in a folder named "Binaries" and will be structured into subfolders named after each of the software elements indicated in the questionnaire.