



## **PhD 16 - Codes4strains**

### **D-PhD16-3.3**

Responsible Partner: Institut Pasteur



## GENERAL INFORMATION

European Joint Programme full title	Promoting One Health in Europe through joint actions on foodborne zoonoses, antimicrobial resistance and emerging microbiological hazards
European Joint Programme acronym	One Health EJP
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## DOCUMENT MANAGEMENT

Project deliverable	D-PhD16-3.3
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Dissemination level <i>PU: Public (default) CO: confidential, only for members of the consortium (including the Commission Services)</i>	PU <b>This is the default setting.</b> If this project deliverable should be confidential, please add justification here (may be assessed by PMT): ..... .....
Dissemination <i>Author's suggestion to inform the following possible interested parties.</i>	OHEJP WP 1 <input type="checkbox"/> OHEJP WP 2 <input type="checkbox"/> OHEJP WP 3 <input checked="" type="checkbox"/> OHEJP WP 4 <input type="checkbox"/> OHEJP WP 5 <input type="checkbox"/> OHEJP WP 6 <input type="checkbox"/> OHEJP WP 7 <input type="checkbox"/> Project Management Team <input type="checkbox"/> Communication Team <input type="checkbox"/> Scientific Steering Board <input type="checkbox"/> National Stakeholders/Program Owners Committee <input type="checkbox"/> EFSA <input type="checkbox"/> ECDC <input type="checkbox"/> EEA <input type="checkbox"/> EMA <input type="checkbox"/> FAO <input type="checkbox"/> WHO-EU <input type="checkbox"/> OIE <input type="checkbox"/> Other international stakeholder(s): ..... Social Media: ..... <b>Other recipient(s):</b> .....



### SNapperDB Ecoli implemented for full dataset

We used the *Escherichia coli* dataset published by Holmes et al. in 2018 (1), and is composed of 150 stains.

This article provide 149 HierCC addresses and 109 SNP addresses. In addition, thanks to the project name, we were able to extract the 149 cgMLST profiles (2,513 core loci from EnteroBase schema), from EnteroBase. cgMLST profiles have been provide.

We have been compare the different approaches to existing nomenclatures (SNP address, multi-level cgMLST classifications, LIncodes) with each other.

#### **References:**

1. Anne Holmes, Timothy J. Dallman, Sharif Shabaan, Mary Hanson, Lesley Allison. 2018. Validation of Whole-Genome Sequencing for Identification and Characterization of Shiga Toxin-Producing *Escherichia coli* To Produce Standardized Data To Enable Data Sharing. *Journal of Clinical Microbiology* Feb 2018, 56 (3) e01388-17; DOI: 10.1128/JCM.01388-17



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Uberstrain	Name	HCO	HC2	HC5	HC10	HC20	HC50	HC100	HC200	HC400	HC1100	HC1500	HC2000	HC2350	LINcodes &	PHE SNP
ESC_HA9924AA	OMPWW5	30173	30173	30173	30173	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_18_0_0_0_0	4.4.4.2079.2382.2437.3174
ESC_HA9881AA	1O7QHH	57374	57374	57374	57374	57374	15874	4816	63	63	63	63	63	1	0_0_0_0_0_0_5_0_1_0_0_0_0	1.852.1273.2362.2764.2859.3125
ESC_HA9784AA	1OH28L	57299	57299	57299	15653	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_4_0_0_0_0	2.8.351.2046.2575.2662.3018
ESC_HA9905AA	1RT1D7	37862	37862	37862	37862	37862	37862	1804	1357	1089	1089	5	2	1	0_3_3_0_0_0_0_0_0_0_0_0_0	
ESC_HA9855AA	23XAUB	57296	57296	57296	35086	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_3_0_1_0_0	4.4.4.2289.2664.2756.3009
ESC_HA9929AA	26AKRI	57477	24232	24232	24232	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_8_1_0_0_1	4.4.4.611.2621.2711.2950
ESC_HA9808AA	2EW7EO	57336	30565	30565	30565	30565	30565	30565	1027	877	877	5	2	1	0_3_2_1_0_0_0_0_0_0_0_0_1	
ESC_HA9803AA	2KAKFK	57332	57332	57332	57332	37871	699	699	699	699	699	699	2	1	0_5_0_0_0_0_0_0_0_1_0_0_0	
ESC_HA9901AA	2M8BS8	37927	36511	36511	36511	14912	2010	94	6	6	2	2	2	1	0_3_9_0_0_0_0_2_0_0_0_1_0	
ESC_HA9842AA	2MCE5F	57307	15805	15805	15805	15805	15794	1872	63	63	63	63	63	1	0_0_0_0_0_3_0_1_0_0_0_0_0	5.6.301.595.2671.2763.3016
ESC_HA9801AA	2WZ2K3	57331	57331	57331	57331	57331	1022	1022	63	63	63	63	63	1	0_0_0_0_0_0_1_1_0_0_0_0_0	26.844.1247.2305.2689.2781.3036
ESC_HA9927AA	310GTQ	51888	51888	51888	51888	51888	15794	1872	63	63	63	63	63	1	0_0_0_0_0_3_0_2_0_0_0_0_0	5.185.1279.2375.2790.2892.3163
ESC_HA9785AA	343VH8	51607	51572	51572	51572	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_0_0_0_0_0	2.8.25.625.869.911.3027
ESC_HA9800AA	3FAYR7	57330	57330	57330	14985	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_11_0_0_0_0	4.4.4.611.2706.2800.3057
ESC_HA9902AA	3M2NM5	36558	36558	36558	36558	36558	14680	1081	1081	1081	1081	5	2	1	0_3_4_0_0_0_0_1_0_0_0_0_0	
ESC_HA9886AA	3MFH68	57432	57432	57432	25561	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_21_0_0_0_0	4.4.1276.2371.2783.2884.3154
ESC_HA9876AA	3TDTH5	57371	57371	57371	57371	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_12_0_0_0_0	4.4.1255.2324.2711.2805.3063



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ESC_HA9794AA	4KUUQE	57326	57326	24254	4816	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_2_1_0_0_0	4.4.4.611.2676.2768.3022
ESC_HA9887AA	4KVMUQ	57434	57434	57434	57434	36006	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_1_0_0_0_0_0	2.8.1325.2492.2954.3070.3386
ESC_HA9907AA	4N4XMK	57323	57323	51134	51134	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_6_2_0_0_0	4.4.4.2298.2679.2771.3025
ESC_HA9821AA	4Y2BJE	57343	57305	57305	14985	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_11_1_0_0_0	4.4.4.611.2668.2760.3013
ESC_HA9911AA	55UI7F	57465	57465	57465	57465	2436	1872	63	63	63	63	63	63	1	0_0_0_0_0_3_0_3_0_0_0_0_0	5.156.1245.2299.2680.2772.3026
ESC_HA9878AA	570WBX	57372	57372	57372	57372	15603	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_11_0_0_0_0	2.8.393.2365.2775.2873.3142
ESC_HA9789AA	573DXV	57322	57322	57322	57322	15603	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_10_0_0_0_0	2.8.1248.2306.2690.2782.3038
ESC_HA9873AA	5G5FCU	57369	57369	57369	51661	15671	15671	1022	63	63	63	63	63	1	0_0_0_0_0_0_1_0_0_0_0_0_0	26.845.1252.2312.2697.2789.3045
ESC_HA9857AA	6Y1M2L	57357	57357	57357	57357	57357	57357	1957	13	13	5	2	1	0_4_1_0_0_0_1_0_0_0_0_0_0		
ESC_HA9835AA	77AXH9	51520	51520	51520	51520	35059	35059	193	63	63	63	63	63	1	0_0_0_0_0_2_1_0_0_0_0_0_0	12.767.1100.2045.2325.2384.2552
ESC_HA9858AA	77AZUC	57360	53138	53138	53138	53138	1806	1806	1806	1806	1765	1765	1750	1	1_1_1_0_0_0_0_1_0_0_0_0_0	
ESC_HA9839AA	77HCGX	57353	57352	15902	4816	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_0_0_0_0_0	4.4.4.769.2688.2780.3035
ESC_HA9885AA	77WWNX	57377	57377	23987	23987	23987	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_9_0_0_0_0	2.8.413.2272.2640.2863.3130
ESC_HA9782AA	7IA6Z8	51607	51572	51572	51572	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_0_0_0_0_0	2.8.25.625.869.911.1065
ESC_HA9799AA	7P7KRP	57329	51131	51131	51131	51131	15434	193	63	63	63	63	63	1	0_0_0_0_0_2_0_0_0_0_0_0_0	9.148.298.681.2675.2767.3021
ESC_HA9850AA	7QR4BJ	57309	57309	57309	25560	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_5_0_0_0_0	2.8.25.709.2714.2808.3066
ESC_HA9790AA	7TJK6X	57323	57323	51134	51134	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_6_2_0_0_0	4.4.4.2298.2679.2771.3025
ESC_HA9868AA	7Z3NBM	57365	57365	57365	57365	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_12_1_0_0_0	4.4.4.2330.2719.2813.3071



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ESC_HA9921AA	82CKOX	57376	36338	36338	36338	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_6_0_0_0_0	4.4.1196.2216.2753.2848.3113
ESC_HA9899AA	82EZYG	36498	36498	36498	36498	21347	1918	560	560	560	560	560	560	1	0_2_0_0_0_0_0_0_0_0_0_0_0	
ESC_HA9928AA	857EAE	57476	57476	37561	15480	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_15_1_0_2_0	4.4.4.1362.2260.2880.3150
ESC_HA9888AA	89O50A	57433	57433	35773	34857	34857	15920	2120	63	63	63	63	63	1	0_0_0_0_0_1_0_0_0_0_0_0_0	24.769.1102.2049.2431.2907.3183
ESC_HA9830AA	8UW7B3	30431	30431	30431	30431	30431	1948	1310	1310	1310	1310	1310	2	1	0_1_0_0_0_0_0_1_0_0_0_0_0	
ESC_HA9862AA	8X4573	53135	53128	53128	53128	53128	1806	1806	1806	1806	1765	1765	1750	1	1_1_1_0_0_0_0_0_0_0_0_0_0	
ESC_HA9906AA	8ZUVR8	36516	36516	36516	36516	36516	578	578	578	84	5	2	1	1	0_3_5_0_0_0_0_0_0_0_0_0_0	
ESC_HA9824AA	96B45F	57344	57344	57344	36449	36449	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_19_0_0_0_0	4.4.4.2023.2770.2866.3133
ESC_HA9918AA	99KF5V	37561	37561	37561	15480	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_15_1_0_1_0	4.4.4.1362.2260.2315.2480
ESC_HA9809AA	9CJ5V4	57303	30573	30573	30573	30573	1086	1086	1086	1086	1086	1086	2	1	1_0_0_0_0_0_0_0_0_0_0_0_0	
ESC_HA9832AA	9OD7A0	57349	57349	57349	57349	57349	1081	1081	1081	1081	5	2	1	1	0_3_4_0_0_0_0_0_0_0_0_0_0	
ESC_HA9853AA	9TWUKK	57294	57294	57294	57294	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_6_1_0_0_0	4.4.4.2313.2698.2790.3046
ESC_HA9914AA	A6024V	57467	51932	37561	15480	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_15_1_0_0_0	4.4.4.1362.2260.2794.3050
ESC_HA9793AA	AE37SI	57325	57325	57325	57325	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_2_2_0_0_0	4.4.4.2334.2723.2817.3075
ESC_HA9889AA	AQXQFC	57436	57436	57436	57436	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_0_0_0_0	2.8.25.2385.2806.2909.3186
ESC_HA9838AA	B2G40Q	57355	57355	57355	57355	51131	15434	193	63	63	63	63	63	1	0_0_0_0_0_2_0_0_0_1_0_0_0	9.148.298.2296.2677.2769.3023
ESC_HA9894AA	BAT1K5	37561	37561	37561	15480	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_15_1_0_1_0	4.4.4.1362.2260.2315.2480
ESC_HA9848AA	BHOWI1	57310	57310	57310	57310	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_2_1_0_0_0	2.8.25.2287.2684.2776.3031



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ESC_HA9840AA	BMHPB6	57306	57306	57306	57306	15813	15560	15560	63	63	63	63	63	1	0_0_0_0_0_2_0_0_0_0_0_0	31.66.125.2314.2699.2791.3047
ESC_HA9931AA	BMSX1P	57479	57479	57479	15651	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_0_16_0_0_0_0	4.4.4.1317.2771.2867.3136
ESC_HA9916AA	BMWDMJ	8085	6470	6470	6470	6470	6470	1872	63	63	63	63	63	1	0_0_0_0_0_3_0_0_0_0_0_0	5.262.444.841.1085.1128.3061
ESC_HA9811AA	BSAFPT	57337	37928	37928	15467	15467	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_1_1_0_0_0_0	4.4.305.2359.2759.2854.3120
ESC_HA9903AA	BYSO3C	57461	36555	36555	36555	36555	2144	2144	2144	2144	1765	1765	1750	1	1_1_0_0_0_0_0_0_0_0_0_0	
ESC_HA9867AA	BZR469	57364	57364	57364	57364	57364	15823	15823	741	741	63	63	63	1	0_0_0_0_1_0_0_0_0_0_0_0	56.475.1243.2295.2674.2766.3020
ESC_HA9891AA	CAVN25	57438	57438	57438	15480	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_0_15_0_0_0_0	4.4.4.1362.2743.2838.3103
ESC_HA9884AA	CFTMK9	57376	36338	36338	36338	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_0_6_0_0_0_0	4.4.1196.2216.2753.2848.3140
ESC_HA9783AA	CHCI02	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.1066
ESC_HA9861AA	CMVJUB	38562	38562	38562	38562	38562	38562	38562	5006	3593	5	2	1	0_4_0_0_0_0_0_0_0_0_0_0		
ESC_HA9792AA	CR77Z6	57324	57324	35086	35086	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_0_3_0_0_0_0	4.4.4.2289.2664.2792.3048
ESC_HA9879AA	CW7W1X	57337	37928	37928	15467	15467	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_1_1_0_0_0_0	4.4.305.2359.2759.2854.3120
ESC_HA9836AA	D366DE	57352	57352	15902	4816	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_0_0_0_0_0_1	4.4.4.769.2688.2780.3054
ESC_HA9877AA	D5UJGB	57370	24232	24232	24232	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_0_8_1_0_0_0	4.4.4.611.2621.2711.3115
ESC_HA9920AA	D69YXV	57471	51131	51131	51131	51131	15434	193	63	63	63	63	63	1	0_0_0_0_0_2_0_0_0_0_0_2	9.148.298.681.2760.2855.3121
ESC_HA9904AA	DI9OW6	57290	57290	57290	57290	57290	57290	57290	2022	24	5	5	2	1	0_3_10_0_0_0_0_0_0_0_0_0	
ESC_HA9926AA	DN25ZT	30173	30173	30173	30173	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_0_18_0_0_0_0	4.4.4.2079.2382.2437.3127
ESC_HA9823AA	DQVI1X	57305	57305	57305	14985	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_3_0_11_1_0_0_1	4.4.4.611.2668.2760.3056



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ESC_HA9919AA	EFZK6H	37561	37561	37561	15480	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_15_1_0_1_0	4.4.4.1362.2260.2315.2480
ESC_HA9810AA	EQ7SGH	57338	35069	35069	35069	8087	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_1_0_0_0_0_0	4.4.305.605.2363.2424.3134
ESC_HA9910AA	EV2LVC	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.1066
ESC_HA9802AA	FAUAXX	118192	118192	118192	57334	57334	57334	21411	1811	1811	1811	5	2	1	0_3_8_0_0_0_0_0_0_0_0_0_0	
ESC_HA9865AA	FXZ3AU	36634	36634	36634	36634	36634	36634	36634	4992	4992	82	5	2	1	0_3_7_0_0_0_0_0_0_0_0_0_0	
ESC_HA9827AA	GAFPYZ	30569	30569	30569	30569	30569	30569	30569	30569	1181	1181	1181	1	1	1_2_0_0_0_0_0_0_0_0_0_0_0	
ESC_HA9825AA	H541VW	36493	36493	36493	36493	36493	29641	29641	29641	29641	3653	5	2	1	0_3_2_2_0_0_0_0_1_0_0_0_0	
ESC_HA9897AA	HHZWNF	30439	30439	30439	30439	30439	30439	30439	21474	21474	1965	1965	1	1	1_3_0_0_0_0_0_0_0_0_0_0_0	
ESC_HA9866AA	HKCVSH	57363	38165	38165	38165	38165	1852	94	6	6	2	2	2	1	0_3_9_0_0_0_0_0_0_0_0_0_0	
ESC_HA9854AA	HV2LCP	57295	57295	57295	57295	57295	57295	57295	63	63	63	63	63	1	0_0_0_0_0_0_3_2_0_0_0_0_0	101.846.1260.2336.2727.2821.3079
ESC_HA9890AA	HZHXPX	57437	51765	51765	51765	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_5_0_0_0_0	4.4.4.1408.2784.2885.3182
ESC_HA9912AA	I0S9UI	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.1066
ESC_HA9844AA	I11BZ4	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.1066
ESC_HA9900AA	I20VK7	37927	36511	36511	36511	14912	2010	94	6	6	2	2	2	1	0_3_9_0_0_0_0_0_2_0_0_0_0	
ESC_HA9880AA	I2J4WJ	57373	57373	57373	57373	15568	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_7_0_0_0_0	2.8.327.2366.2776.2874.3143
ESC_HA9829AA	ID13D9	36518	36518	36518	36518	36518	36518	36518	1957	13	13	5	2	1	0_4_1_0_0_0_0_0_0_0_0_0_0	
ESC_HA9869AA	IIZQBE	57367	57367	15216	4816	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_2_0_0_0_0	4.4.4.611.2243.2793.3049
ESC_HA9843AA	IPA9CE	57308	57308	57308	57308	57308	15874	4816	63	63	63	63	63	1	0_0_0_0_0_0_5_0_0_0_0_0_0	1.269.1261.2339.2731.2825.3084





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ESC_HA9917AA	IRRAB9	51497	51497	51497	51497	51497	15874	4816	63	63	63	63	63	1	0_0_0_0_0_0_5_1_0_0_0_0_0	1.1.1056.1968.2234.2287.2451
ESC_HA9922AA	J7TEP7	57472	57472	57472	57472	57472	6177	6177	6177	6177	6177	6177	1750	1	1_4_0_0_0_0_0_0_0_0_0_0_0	
ESC_HA9864AA	JEGAME	53131	53131	53131	53131	15642	15642	4933	4933	1806	1765	1765	1750	1	1_1_1_0_0_1_0_0_0_1_0_0_0	
ESC_HA9813AA	JR40OF	57339	57339	57339	57339	57339	1985	1985	3	3	3	3	2	1	0_3_0_0_0_0_0_0_1_0_0_0_0_0	
NA	JYK87Q	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.8.25.626.870.912.3051
ESC_HA9898AA	K1HC8N	57313	57313	35497	24223	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_8_0_0_0_0	4.4.4.611.2176.2225.3147
ESC_HA9837AA	KDO92T	57354	57305	57305	14985	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_11_1_0_0_2	4.4.4.611.2668.2760.3070
ESC_HA9806AA	KLAV92	57304	36507	36507	36507	36507	36507	94	6	6	2	2	2	1	0_3_9_0_0_0_0_0_1_0_0_0_0_0	
ESC_HA9847AA	KXX88Q	57310	57310	57310	57310	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_2_1_0_0_0	2.8.25.2287.2684.2776.3031
ESC_HA9796AA	LEPTAZ	57328	57327	57327	57327	8075	2436	1872	63	63	63	63	63	1	0_0_0_0_0_3_0_3_1_0_0_0_1	5.156.490.2062.2708.2802.3083
ESC_HA9807AA	LRDN86	37986	37986	37986	37986	37986	37986	37986	37986	37986	13	5	2	1	0_4_2_0_0_0_0_0_0_0_0_0_0	
ESC_HA9788AA	LTB46E	51607	51572	51572	51572	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_0_0_0_0_0	2.8.25.625.869.911.1065
ESC_HA9787AA	LXWFT8	57301	57301	57301	57301	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_1_0_0_0_0	4.4.4.2322.2709.2803.3060
ESC_HA9930AA	M7UGH4	57478	57478	57478	57478	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_0_6_0_0_0_0	2.8.25.2367.2777.2875.3144
ESC_HA9871AA	MEH2AK	57292	57292	57292	57292	23987	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_9_1_0_0_0	2.8.413.2310.2695.2787.3043
ESC_HA9814AA	MH26D6	57305	57305	57305	14985	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_11_1_0_0_1	4.4.4.611.2668.2760.3041
ESC_HA9908AA	MN10UP	51607	51572	51572	51572	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_0_0_0_0_0	2.8.25.625.869.911.1065
ESC_HA9786AA	N4ACH0	57300	57300	57300	57300	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_3_0_0_0_0	2.8.1251.2311.2696.2788.3044



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ESC_HA9852AA	N7OBMS	57291	57291	57291	57291	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_2_0_0_0_1	2.8.25.2287.2662.2754.3007
ESC_HA9923AA	NIB7MI	57474	57474	57474	30214	30214	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_12_0_0_0_0	2.8.1108.2064.2779.2879.3149
ESC_HA9804AA	NPHD3I	57333	57333	36507	36507	36507	36507	94	6	6	2	2	2	1	0_3_9_0_0_0_0_1_0_0_1_0_0	
ESC_HA9925AA	NYIQHP	57475	57475	57475	35086	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_3_0_2_0_0	4.4.4.2289.2796.2899.3171
ESC_HA9805AA	OGJRAM	118193	118193	118193	118193	57334	57334	21411	1811	1811	1811	5	2	1	0_3_8_0_0_0_0_0_0_1_0_0_0	
ESC_HA9791AA	OITYP8	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.3037
ESC_HA9795AA	OPPULB	57327	57327	57327	57327	8075	2436	1872	63	63	63	63	63	1	0_0_0_0_0_3_0_3_1_0_0_0_0	5.156.490.2062.2708.2802.3059
ESC_HA9826AA	OULB06	57345	30435	30435	30435	30435	30435	2962	1051	1051	80	5	2	1	0_3_1_0_0_0_0_0_0_0_0_0_0	
ESC_HA9815AA	OWXELP	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.1066
ESC_HA9851AA	P3DC6X	57311	57291	57291	57291	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_2_0_0_0_0	2.8.25.2287.2662.2754.3068
ESC_HA9820AA	P43FBG	57342	57342	57342	57342	57342	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_20_0_0_0_0	4.4.1246.2300.2683.2775.3030
ESC_HA9915AA	PCJU2G	57468	51131	51131	51131	51131	15434	193	63	63	63	63	63	1	0_0_0_0_0_2_0_0_0_0_0_0_1	9.148.298.681.2672.2764.3017
ESC_HA9860AA	PM0VFE	57358	57358	57358	57358	57358	1948	1948	1310	1310	1310	1310	2	1	0_1_0_0_0_0_0_0_0_0_0_0_0	
ESC_HA9845AA	PUKTM4	51607	51572	51572	51572	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_0_0_0_0_0	2.8.25.625.869.911.1065
ESC_HA9846AA	Q9OYIE	37561	37561	37561	15480	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_15_1_0_1_0	4.4.4.1362.2260.2315.2480
ESC_HA9872AA	QEPU4A	57366	42469	42469	36629	65	65	65	63	63	63	63	63	1	0_0_0_0_0_0_4_0_0_0_0_0_0	11.155.1249.2307.2692.2784.3040
ESC_HA9883AA	QPX619	57375	51480	23982	23982	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_13_0_1_0_0	4.4.4.1991.2414.2485.3160
ESC_HA9870AA	RZ1Q1M	57293	57293	51877	51877	15821	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_4_0_0_0_0	4.4.4.2340.2732.2826.3086



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ESC_HA9895AA	SC7VH6	57313	57313	35497	24223	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_8_0_0_0_2	4.4.4.611.2176.2225.3147
ESC_HA9856AA	SMRJK4	57312	57312	57312	57312	57312	16335	16335	63	63	63	63	63	1	0_0_0_0_0_3_1_0_0_0_0_0_0	3.517.1242.2294.2673.2765.3019
ESC_HA9833AA	THZZIO	30565	30565	30565	30565	30565	30565	30565	1027	877	877	5	2	1	0_3_2_1_0_0_0_0_0_0_0_0_0	
ESC_HA9893AA	TKZVTO	57441	57441	51877	51877	15821	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_4_0_0_1_0	4.4.4.2340.2732.2888.3158
ESC_HA9822AA	TQLIPV	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.1066
ESC_HA9818AA	TUUSB7	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.1066
ESC_HA9896AA	U0QC3K	36520	36520	36520	36520	36520	29641	29641	29641	29641	3653	5	2	1	0_3_2_2_0_0_0_0_0_0_0_0_0	
ESC_HA9859AA	UAIJVV	57359	57359	57359	57359	57359	21611	1966	1966	1966	1966	2	1	1	0_3_6_0_0_0_0_0_0_0_0_0_0	
ESC_HA9797AA	V0Z5RO	57313	57313	35497	24223	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_8_0_0_0_1	4.4.4.611.2176.2225.3085
ESC_HA9882AA	V6WE2C	57288	57288	57288	57288	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_17_0_0_0_0	4.4.4.2350.2798.2901.3175
ESC_HA9834AA	V9GD8F	57351	30642	30642	30642	30642	30642	2007	2007	2007	96	5	2	1	0_3_2_0_0_0_0_0_0_0_0_0_0	
ESC_HA9849AA	VCM0ZU	51611	51611	51611	51611	51611	6470	1872	63	63	63	63	63	1	0_0_0_0_0_3_0_0_1_0_0_0_0	5.262.1259.2332.2721.2815.3073
ESC_HA9892AA	W00UZ1	57439	57439	57439	57439	15568	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_8_0_0_0_0	2.8.327.2384.2805.2908.3184
ESC_HA9874AA	WK94LX	57287	57287	57287	57287	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_9_0_0_0_0	4.4.1244.2297.2678.2770.3024
ESC_HA9817AA	WKD03X	51127	36432	36432	36432	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_1_1_0_0_0	2.8.25.626.870.912.1066
ESC_HA9841AA	WTKBR6	57356	57356	57356	57356	15891	15891	193	63	63	63	63	63	1	0_0_0_0_0_2_0_1_0_0_0_0_0	9.165.1256.2325.2712.2806.3064
ESC_HA9812AA	X47TVR	57340	57340	57340	57340	57340	57340	2007	2007	2007	96	5	2	1	0_3_2_0_0_0_0_1_0_0_0_0_0	
ESC_HA9875AA	XP1HYH	57368	57368	57368	23982	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_13_0_0_0_0	4.4.4.1991.2788.2890.3161



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<b>ESC_HA9798AA</b>	XPGYLB	57302	57302	57302	57302	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_14_0_0_0_0	4.4.4.622.866.908.1062
<b>ESC_HA9828AA</b>	Y6Y03D	57346	57346	57346	57346	23850	1985	1985	3	3	3	3	2	1	0_3_0_0_0_0_0_0_0_0_0_0_0	
<b>ESC_HA9909AA</b>	Z1CE22	57464	37051	37051	37051	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_10_0_0_0_0	4.4.4.2335.2724.2818.3076
<b>ESC_HA9831AA</b>	Z2TW04	57348	37871	37871	37871	37871	699	699	699	699	699	699	2	1	0_5_0_0_0_0_0_0_0_0_0_0_0	
<b>ESC_HA9863AA</b>	Z5HFP3	57362	53125	53125	50835	15642	15642	4933	4933	1806	1765	1765	1750	1	1_1_1_0_0_1_0_0_0_0_0_0_0	
<b>ESC_HA9819AA</b>	ZEKY4Q	57341	51572	51572	51572	15420	6467	4861	63	63	63	63	63	1	0_0_0_0_0_0_0_0_0_0_0_0_1	2.8.25.625.869.911.3082
<b>ESC_HA9913AA</b>	ZPS4LW	57466	57466	57466	57466	4816	4816	4816	63	63	63	63	63	1	0_0_0_0_0_0_3_0_7_0_0_0_0	4.4.4.611.2725.2819.3077