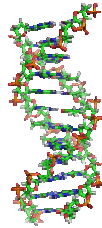


Ejercicio colaborativo “Automatización en Laboratorio Forense”



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Introducción

- Varios métodos de Extracción ADN (DNA-IQ, Prepfilier, Quiagen)
- Varios equipos (Tecan, Beckman, Quiagen, Xiril, Hamilton)
- Publicación Resultados/Encuesta
- No ejercicios de intercomparación (**ENFSI = 3 MUESTRAS**)

2

Objetivo

- Intercomparación de distintas químicas/protocolos vs Equipos
- ¿Comparación Manual vs Robot ?
- Diagnóstico Estado Actual Automatización en Laboratorios de Genética Forense GHEP
- Herramienta de intercambio de experiencias entre Laboratorios
- Registros Sistema de Calidad (ISO 17025)

3

Ejercicio

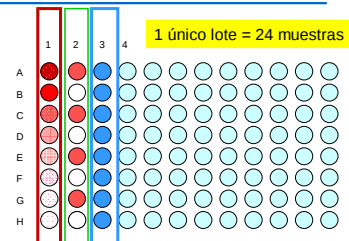
1. Test de **Sensibilidad**
(dilución sangre 1:1, de 5 ul a 0.04ul)

2. Test de **Repetibilidad** (5 ul sangre A2, C2, E2, G2)

3. Test de **Contaminación**
(blancos B2, D2, F2, H2)

4. Test de **Casuística**
(sangre-saliva sobre tejidos, hisopos bucales, FTA, etc)

Muestras biológicas donadas por personal Dpto Biología SECRIM GC



- Extracción / Purificación ADN
- Cuantificación (inhibición)
- Amplificación
- Detección

1 lote por línea de trabajo
(robot/química)

Muestras

- Test de Sensibilidad

- S1: 5 ul
S2: 2.5 ul (1/2 de S1)
S3: 1.25 ul (1/4 de S1)
S4: 0.62 ul (1/8 de S1)
S5: 0.31 ul (1/16 de S1)
S6: 0.16 ul (1/32 de S1)
S7: 0.08 ul (1/64 de S1)
S8: 0.04 ul (1/128 de S1)



- Casuística

- S9: 5 ul saliva sobre denim
- S10: 5 ul saliva sobre tela algodón
- S11: 5 mm2 de tela negra con restos orgánicos (sudor)
- S12: 2.5 ul sangre sobre denim
- S13: 5 mm2 de filtro colilla de cigarrillo
- S14: hisopo bucal
- S15: DNA 9947
- S16: Troquel FTA 3 mm

5

Resultados

- Laboratorios inscritos: 9
- Laboratorios con resultados = 10 Procesos:

- **Ertzaintza**: Tecan Freedom Evo - Prepfler
- **Mossos de Esquadra**: Maxwell 16 – DNA-IQ y Tecan 200 - Prepfler
- **Instituto Nacional de Toxicología** – Barcelona EZ1-QuiaGen
- **Universidad delle Marche – Italia**: Maxwell 16 - DNA-IQ
- **Guardia Civil**: Extracción Orgánica, Automate Express, Magmax Express, Tecan 100, Tecan-150

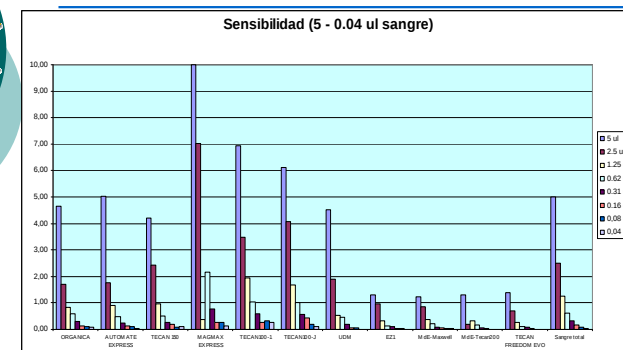
6

Resultados normalizados a (50 ng/ul)

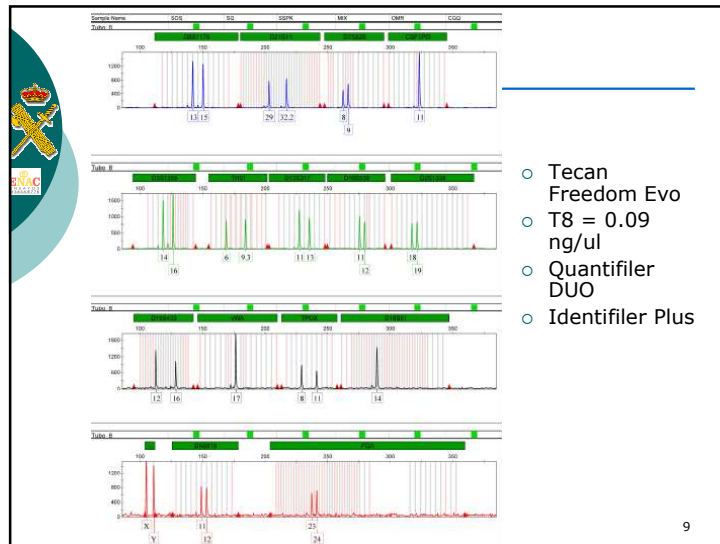
Muestras	AUTO MATE	MAGMA										TECAN 100-1	TECAN 100-2	TECAN 100-3	TECAN 100-4	TECAN 100-5	TECAN 100-6	TECAN 100-7	TECAN 100-8	TECAN 100-9	TECAN 100-10	TECAN 100-11	TECAN 100-12	TECAN 100-13	TECAN 100-14	TECAN 100-15	TECAN 100-16	TECAN 100-17	TECAN 100-18	TECAN 100-19	TECAN 100-20	TECAN 100-21	TECAN 100-22	TECAN 100-23	TECAN 100-24	TECAN 100-25	TECAN 100-26	TECAN 100-27	TECAN 100-28	TECAN 100-29	TECAN 100-30	TECAN 100-31	TECAN 100-32	TECAN 100-33	TECAN 100-34	TECAN 100-35	TECAN 100-36	TECAN 100-37	TECAN 100-38	TECAN 100-39	TECAN 100-40	TECAN 100-41	TECAN 100-42	TECAN 100-43	TECAN 100-44	TECAN 100-45	TECAN 100-46	TECAN 100-47	TECAN 100-48	TECAN 100-49	TECAN 100-50	TECAN 100-51	TECAN 100-52	TECAN 100-53	TECAN 100-54	TECAN 100-55	TECAN 100-56	TECAN 100-57	TECAN 100-58	TECAN 100-59	TECAN 100-60	TECAN 100-61	TECAN 100-62	TECAN 100-63	TECAN 100-64	TECAN 100-65	TECAN 100-66	TECAN 100-67	TECAN 100-68	TECAN 100-69	TECAN 100-70	TECAN 100-71	TECAN 100-72	TECAN 100-73	TECAN 100-74	TECAN 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100-148	TECAN 100-149	TECAN 100-150	TECAN 100-151	TECAN 100-152	TECAN 100-153	TECAN 100-154	TECAN 100-155	TECAN 100-156	TECAN 100-157	TECAN 100-158	TECAN 100-159	TECAN 100-160	TECAN 100-161	TECAN 100-162	TECAN 100-163	TECAN 100-164	TECAN 100-165	TECAN 100-166	TECAN 100-167	TECAN 100-168	TECAN 100-169	TECAN 100-170	TECAN 100-171	TECAN 100-172	TECAN 100-173	TECAN 100-174	TECAN 100-175	TECAN 100-176	TECAN 100-177	TECAN 100-178	TECAN 100-179	TECAN 100-180	TECAN 100-181	TECAN 100-182	TECAN 100-183	TECAN 100-184	TECAN 100-185	TECAN 100-186	TECAN 100-187	TECAN 100-188	TECAN 100-189	TECAN 100-190	TECAN 100-191	TECAN 100-192	TECAN 100-193	TECAN 100-194	TECAN 100-195	TECAN 100-196	TECAN 100-197	TECAN 100-198	TECAN 100-199	TECAN 100-200	TECAN 100-201	TECAN 100-202	TECAN 100-203	TECAN 100-204	TECAN 100-205	TECAN 100-206	TECAN 100-207	TECAN 100-208	TECAN 100-209	TECAN 100-210	TECAN 100-211	TECAN 100-212	TECAN 100-213	TECAN 100-214	TECAN 100-215	TECAN 100-216	TECAN 100-217	TECAN 100-218	TECAN 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Test de Sensibilidad

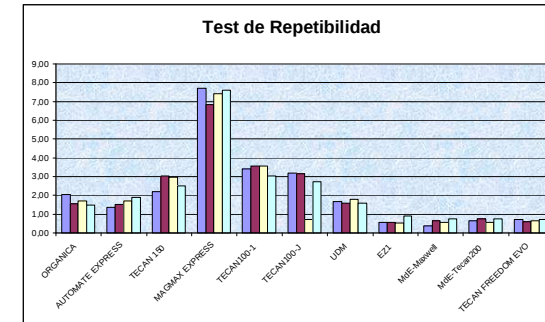


8



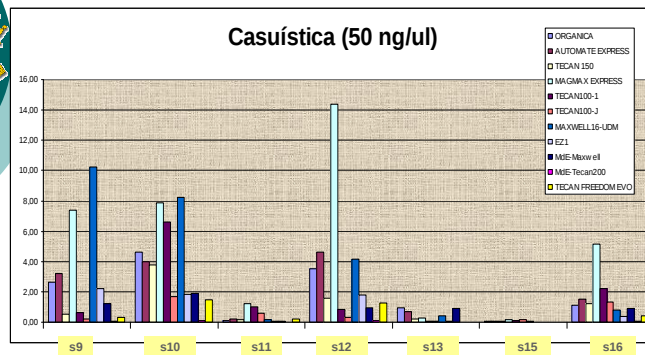
9

Test de Repetibilidad



10

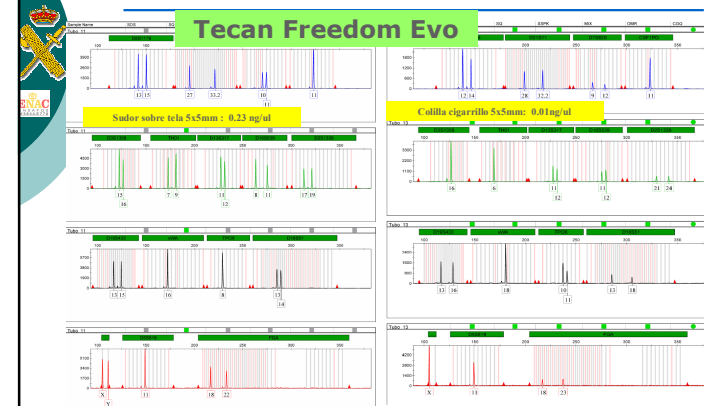
Test de Casuística



Test de Contaminación: No eventos reportados

11

Casuística



12